



# **VALUATION OF THE MILITARY RETIREMENT SYSTEM**

**SEPTEMBER 30, 2007**

**DoD Office of the Actuary  
December 2008**



## ACTUARIAL CERTIFICATION

This report on the military retirement system as of September 30, 2007, has been prepared in accordance with generally accepted actuarial principles and practices. In preparing the report, we have relied upon information maintained by the Office of the Secretary of Defense regarding plan provisions, assets, and participants. The purpose of the actuarial valuation documented in this report is to develop actuarial liability and funding amounts to support the Secretary of Defense and the DoD Board of Actuaries (Board) in meeting the requirements of Chapter 74, Title 10, United States Code. Use of these results for other purposes may not be appropriate.

We have performed the valuation using methods and assumptions approved by the Board. In general, the decrement rates used in the valuation are based on actual experience under the military retirement system. The annual economic assumptions include a 3% rate of inflation, a 3.75% across-the-board salary increase, and a 6% interest rate.

In our opinion, the actuarial assumptions are reasonable and the valuation results present a fair picture of the financial condition of the military retirement system.



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## SUMMARY OF CHANGES FOR THE SEPTEMBER 30, 2007, VALUATION

### Changes in Actuarial Assumptions

At its August 2007 meeting, the Office of the Actuary proposed and the DoD Retirement Board of Actuaries (now known as the DoD Board of Actuaries) approved the following changes for the September 30, 2007, valuation.

#### *New Nondisabled Retiree Death and Nondeath Loss Rates*

The new rates decreased the full-time DoD Normal Cost Percentage (NCP)\* by 0.4 percentage points, and decreased the part-time NCP by 0.3 percentage points. The updated rates led to an actuarial loss of \$18.0 billion. See Appendix I.

#### *New Retired Pay Adjustment Factors and Full and Partial Offsets*

The new factors led to a 0.6 percentage-point increase in the full-time DoD NCP, and a 0.1 percentage-point increase in the part-time NCP. The updated factors resulted in an actuarial loss of \$11.7 billion. See Appendix F.

#### *Death-On-Active-Duty Refinement*

This refinement was made in order to better reflect a provision in the 2007 National Defense Authorization Act (NDAA) which allows surviving spouses of death-on-active-duty (DOAD) members to waive SBP coverage for themselves and give it to the child. This refinement does not change the full- or part-time DoD NCPs, and led to a \$0.1 billion actuarial gain.

#### *New Survivor Rates and Parameters*

The proposed rates have no significant impact on the DoD full-time NCP, and raise the part-time NCP by 0.1 percentage point. The updated rates and parameters result in a \$0.7 billion actuarial gain. See Appendix F and Appendix I.

#### *April 1, 2007 New Pay Table*

In addition to a January 1, 2007, across-the-board pay increase of 2.2%, the 2007 NDAA included a new pay table with targeted increases averaging 0.6% on April 1, 2007, along with an extension of the table to 40 years of service. The new pay table increases the DoD full- and part-time NCPs by 0.1 percentage point, and leads to a \$0.6 billion actuarial loss.

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\* DoD pays only a portion of the total NCP. The portion attributable to concurrent receipt benefits is paid by Treasury.

### *Valuation Refinements*

There were two refinements: (1) an improvement to the Non-Disability Retirement Rates for Non-Selected Reserves with 20 Good Years, and (2) an update to the VA offset parameters. The refinements had no impact on the FY 2009 DoD NCPs, but full- and part-time DoD NCPs for FY 2010 increased 0.1 percentage point. The changes resulted in a \$3.4 billion loss.

### **Changes in Benefits**

In FY 2008, Congress passed Public Law 110-181, the National Defense Authorization Act of FY 2008 (NDAA 2008). The effect of Sections 641, 642, 644, 647, and 648 on the Military Retirement Fund are discussed below.

#### *Early Reserve Retirement*

Section 647 allows a 90-day reduction in the reserve retirement age from age 60 for every 3 months of certain active duty service performed after January 28, 2008 (limited to age 50). Section 648 increases the maximum number of certain annual points used in calculating the retired pay of a reservist from 90 to 130. The new law raised the full-time DoD NCP by 0.2 percentage points, and the part-time DoD NCP by 2.0 percentage points. The benefit change resulted in a \$5.6 billion loss. See Appendix F and Appendix H.

#### *Concurrent Receipt*

Section 641 expands concurrent receipt to include disabled retirees with VA ratings with less than 20 years of service, and Temporary Early Retirement Authority (TERA) retirees, with combat-related disabilities. Section 642 eliminates the phase-in of the offset removal for retirees deemed “unemployable” by the VA, retroactive to December 31, 2004. These have no impact on the NCPs, but lead to a \$1.8 billion loss.

#### *Dependency and Indemnity Compensation (DIC) Offset*

Section 644 provides a monthly allowance for survivors subject to a DIC offset. The allowance increases annually following a schedule, with the benefit ending in 2016. This does not impact the DoD NCPs, but leads to a \$0.3 billion loss.

# **VALUATION OF THE MILITARY RETIREMENT SYSTEM**

## **Introduction**

The military retirement system provides benefits for retirement from active duty and from the reserves, disability retirement benefits, optional survivor coverage, and special compensation programs for certain disabled retirees. A detailed description of current benefits can be found in Appendix A, and a history of the system is in Appendix B.

Public Law 98-94 (currently Chapter 74 of Title 10, U.S.C.) established an aggregate entry-age normal cost funding method for the military retirement system starting October 1, 1984. Under this law, DoD pays the normal cost of the system and the Treasury Department makes payments from general revenues to amortize the unfunded liability, including any gains or losses that have arisen from assumption or benefit changes, or from assumed experience differing from actual experience. Public Law 108-136 modified this process such that DoD's normal cost contribution excludes the cost due to Concurrent Receipt benefits (refer to Appendix A for more information on Concurrent Receipt provisions). Treasury's total contribution includes an additional amount to fund the normal cost for Concurrent Receipt benefits.

Public Law 98-94 also established an independent three-member DoD Retirement Board of Actuaries who were appointed by the President. The Board is required to review valuations of the military retirement system; to determine the method of amortizing unfunded liabilities; to report annually to the Secretary of Defense; and to report to the President and the Congress on the status of the Military Retirement Fund at least every four years. The DoD Office of the Actuary provides all technical and administrative support to the Board. Public Law 110-181 eliminated the Retirement and Education Benefits Boards, and created a new single DoD Board of Actuaries appointed by the Secretary of Defense. Board duties with respect to the Retirement and Education Benefits Funds are similar, and the new law expands the Board's responsibilities to include oversight of any other Fund the Secretary of Defense deems necessary.

The terms of the Board members are fifteen years and a member can be removed only for misconduct or failure to perform the duties of the office. The current Board members are Marsha Bera-Morris (Chairman), John Hartnedy, and James Verlautz. The DoD Chief Actuary is the Executive Secretary for the Board.

Military retired pay is based on "basic pay." This is the principal element of military compensation that all members receive; however, it is not analogous to private or public sector salaries for comparative purposes. Reasonable comparisons can be made to Regular Military Compensation (RMC). RMC is the sum of (1) basic pay, (2) the housing allowance, which varies by grade, location, and dependency status, (3) the subsistence allowance and, (4) the tax advantages accruing to allowances because they are not subject to federal income tax. Consequently, comparisons of military retired pay to other pension systems should recognize the relationship to RMC rather than to basic pay only. Appendix A contains a more complete description of this topic.

## **Valuation Data and Procedure**

The valuation input data were extracted from files maintained at the Defense Manpower Data Center (DMDC). Data on individual retirees and survivors came from official files submitted by the Defense Finance and Accounting Service (DFAS). Reserve data were obtained from the Reserve Component Common Personnel Data System (RCCPDS), the official source for all reserve strengths and statistics.

Active duty data came from files provided by the four military personnel centers; these data were edited and adjusted by less than 0.1 percent to agree with official totals supplied by the Comptroller. Dollar amounts include the January 1, 2008, across-the-board pay raise. These totals are summarized in Table 1.

TABLE 1

INITIAL ACCOUNTING FIGURES AS OF SEPTEMBER 30, 2007

Total Active Duty Personnel + Full-Time Reservists	1,438,141
Total Monthly Basic Pay	\$4.12 billion
Total Selected Drilling Reservists	756,691
Total Monthly Basic Pay	\$0.44 billion
Total Number of Nondisability Retirees ***	1,774,372
Total Monthly Retired Pay	\$3.32 billion
Total Number of Disability Retirees ***	85,305
Total Monthly Retired Pay	\$0.11 billion
Total Number of Surviving Families ***	286,726
Total Monthly Survivor Annuities	\$0.27 billion

\*\*\* Amounts do not reflect increased benefits in the 2008 NDAA. Costs, liabilities, and outlays in this report, however, reflect the benefit increases unless otherwise stated.

Population and pay projections are generated by an actuarial projection model (GORGO<sup>1</sup>). Due to law changes, additional adjustments to the pay projection are made outside of GORGO. For use in this model, the data on active duty personnel and drilling reservists are grouped into cells by age and number of years of service. Each cell contains the number and the average basic pay for personnel with that particular combination of age and length of service. Data on the retired population and surviving families are grouped into cells by age, and each cell contains the number and total net annualized retired pay or survivor annuity.

Separate data arrays are maintained in GORGO for each of the population categories listed in Table 2. These data are displayed in Appendix C.

In GORGO, these starting populations are projected year by year into the future. Each year personnel are moved from one population category to another (e.g., from active to retired, or dropped from the system altogether) by means of decrement rates such as withdrawal, nondisability retirement, temporary disability, permanent disability, transfer, death with and without survivors, etc. Basic pay scale increases are assumed to be 3.75 percent per year. Basic pay is also increased by individual promotion and longevity increases. Generally, retired pay and survivor annuities are increased by cost-of-living adjustments (COLAs) of 3 percent per year for retirees and survivors who receive a full COLA. At the end of each year, the number of people and the amounts paid in basic pay and benefits are saved, and the population is aged. After 100 years, when an immaterial number of the current active or retired personnel are left in the system, the present values of the series of future benefit payments and future basic pay outlays are determined, using the valuation interest rate of 6 percent per year. Because no new entrants come into the system, the projection is said to be “closed group.”

There is also an option in GORGO for an “open group” projection in which new entrants are added each year to meet projected end-strengths. Detailed results of an open group projection of the military retirement system appear in Appendix K.

An open group projection appears later in this text (Table 9). This projection, which shows the past and projected flow of plan assets, includes the total basic payroll over the next 100 years, the normal cost contributions, the payments to amortize the unfunded liability, investment income, fund disbursements, and the fund balance. All of these items are discussed in detail throughout the text of this report.

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<sup>1</sup> GORGO is the name given to the program by a former DoD Chief Actuary. It was named after a monster featured in a 1961 British science fiction movie based on a variation of *Godzilla*.

TABLE 2  
GORGO POPULATION CATEGORIES

1. Active duty populations and basic pay
  - a. Officers
  - b. Enlistees
2. Selected reserve populations, basic pay, and benefit formula (FINAL PAY or HI-3)
  - a. Officers
  - b. Enlistees
3. Non-selected reserve (those who have completed 20 good years and have not reached paid retirement) populations, basic pay, and benefit formula
  - a. Officers
  - b. Enlistees
4. Retiree populations and retired pay
  - a. Nondisabled officers (no reservists)
  - b. Nondisabled enlistees (no reservists)
  - c. Reserve officers
  - d. Reserve enlistees
  - e. Disabled officers (Permanent and Temporary)
  - f. Disabled enlistees (Permanent and Temporary)
5. Surviving families in a survivor benefit plan and total annuities
  - a. Retired Serviceman's Family Protection Plan (RSFPP)
  - b. Survivor Benefit Plan (SBP)
  - c. Reserve Component Survivor Benefit Plan (RCSBP)
  - d. Death on active duty supplement to VA
  - e. Minimum income
6. Typical new-entrant cohort
  - a. Officers
  - b. Enlistees

Economic assumptions, i.e., the annual rate of inflation, the annual basic pay scale increases, and the annual valuation interest rate, were decided upon by the DoD Board of Actuaries after extensive analysis of past trends and future expectations. A discussion of these trends and other considerations is contained in Appendix D.

The decrement rates and other non-economic assumptions can be categorized as follows:

1. Active duty decrement rates
2. Retiree and survivor decrement rates
3. Drilling and non-drilling (with 20 good years) reserve decrement rates
4. Internal computer program parameters
5. Other rates (e.g., mortality improvement)

In general, the decrement rates and GORGO parameters are based on military-specific experience. The rates and descriptions of how they were derived appear in Appendixes G through J. The internal computer program parameters, dealing with such matters as the survivor benefit elections, premium deductions, and member/beneficiary age differences, are described in Appendix F.

## **Assets**

The assets of the Military Retirement Fund are invested in special issue Treasury obligations bearing interest at rates determined by the Secretary of the Treasury taking into consideration current market yields for outstanding marketable U.S. obligations of comparable maturities. Each security issued to the Fund “mirrors” a security that has been issued to the public, i.e., it has the same maturity date and coupon rate. The special issue security that is mirrored may have been issued recently, or at any time in the past. Under current procedures adopted by Treasury, the investment manager (DFAS Trust Fund Accounting Division) is permitted to redeem long-term special issue securities at any time before maturity for their fair market value, which is based on the bid price for the public issue with the same maturity date and coupon rate. However, Treasury policy encourages a buy-and-hold approach giving consideration to the needs of the Fund in determining the maturities of securities purchased.

The investment manager must follow the asset investment strategy approved by the DFAS Investment Board at their semiannual meetings. The current asset investment strategy is to invest future purchases in Treasury Inflation-Protected Securities (TIPS) under a 6-year ladder approach. This strategy hedges almost all of the inflationary pressures while minimizing liquidity risks to the fund. “Almost all” is due to the inconsistency between the TIPS calculation of inflation (CPI-U) and the Fund’s crediting of inflation (CPI-W) to retiree and survivor benefits.

For purposes of determining the unfunded liability, the assets of the Fund are valued using the amortized cost method. Under this method, the yield to maturity of a security valued at any point in time is equal to the yield to maturity at the time of purchase. In the valuation of the military retirement system, the amortized cost value is referred to as the “actuarial value of

assets.” The actuarial value of assets is determined by amortizing premium and discount over the life of the securities. The total investment return includes: the interest coupons received, the change in the amortized cost value during the year, and the inflation compensation accrued from the holdings of TIPS. The actuarial value of assets used in the determination of the unfunded liability includes the “accrued interest,” which is the amount of the next semiannual interest coupon payment that has accrued since the date of the last coupon payment. The amount of the “accrued interest” is determined by multiplying the coupon payment by the ratio of the time that has elapsed since the last coupon payment date to the total time between coupon payments. Table 3 presents a statement of the actuarial value of assets as of September 30, 2007; Table 4 presents a statement of changes in the actuarial value of assets.

In an open group projection of a retirement system where the total number of employees is held constant, the number of retirees and survivors on the roll at year end, as well as the number withdrawing, retiring, dying, etc., each year, eventually levels out. When this occurs, the population is said to be “stationary.” In the projection in Table 9, DoD-projected endstrengths are used through the end of FY13. After that, the force size is held constant each year. However, the assumption of future mortality improvement results in a small increase in the retired population each year, so that the retired population is nearly, but not completely, stationary.

When a population becomes stationary, the fund disbursements increase each year at the same rate as total pay, which is 3.75 percent per year. If the method of funding the system is theoretically sound, the value of the assets in the Fund will also increase at this same rate, and thus will become a level percentage of pay. Otherwise, the fund would either increase indefinitely as a percent of pay, or decrease until it was zero.

A portion of the investment income must be used to generate the 3.75 percent Fund increases and cannot be used to pay benefits. For example, in the year 2044 (on Table 9), the projected normal cost payment is \$69.4 billion, the investment income is \$212.7 billion, and Fund disbursements are \$147.7 billion. The beginning-of-year fund balance is \$3,578.0 billion. The two sources of Fund income will cover benefit payments plus 3.75 percent of the beginning-of-the-year fund balance. That is, \$69.4 billion plus \$212.7 billion exceeds \$147.7 billion plus \$134.2 billion ( $\$3,578.0 \text{ billion} \times .0375$ )—the amount that would be required for the fund to grow by 3.75 percent during the year. The lack of equality in the later years of the projection is due to (1) mortality improvement, which keeps the retired population from being stationary, (2) the difference between the short-term economic assumptions and the ultimate economic assumptions (see Table 9 Footnote), and the fact that the projection uses unfunded liability amortization payments determined in the September 30, 2007, valuation.

Under generally accepted accounting principles (GAAP), private sector plans must also provide a “Statement of Net Assets Available for Benefits,” where the assets are valued at fair market value. This statement is included in Appendix L and is strictly for descriptive purposes only.



TABLE 3

DEPARTMENT OF DEFENSE  
MILITARY RETIREMENT FUND  
STATEMENT OF ACTUARIAL VALUE OF ASSETS  
(\$ in thousands)

	For the Plan Year Ended September 30, 2007
<u>Assets</u>	
1) Investments, at book value:	
U.S. Government securities <sup>1</sup>	\$215,364,297
2) Accounts receivable:	
Accrued interest <sup>2</sup>	\$2,720,698
Due from military retirees or their survivors	\$24,166
Intragovernmental	\$118,950
3) Cash:	<u>\$20,376</u>
<u>Actuarial value of assets</u>	<u>\$218,248,487</u>

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<sup>1</sup> Book value is determined by 1) amortizing premium and discount over the life of the securities using the effective interest method and 2) including additional inflation compensation from TIPS.

<sup>2</sup> Includes accrued interest receivable and interest purchased.

TABLE 4

DEPARTMENT OF DEFENSE  
MILITARY RETIREMENT FUND  
STATEMENT OF CHANGES IN ACTUARIAL VALUE OF ASSETS  
(\$ in thousands)

	For the Plan Year Ended September 30, 2007
1) Actuarial value of assets at beginning of plan year:	\$208,446,107
2) Investment income:	
Interest	\$11,782,263
Net appreciation (depreciation) in book value of investments <sup>1</sup>	\$(1,454,795)
3) Contributions:	
From Services	\$14,483,714
Appropriation to amortize the unfunded liability	\$26,048,000
Appropriation for Treasury Normal Cost Contribution	\$2,452,000
4) Total additions (2 + 3):	\$53,311,182
5) Benefits paid to participants:	<u>\$43,508,802</u>
Actuarial value of assets (1 + 4 – 5):	<u>\$218,248,487</u>

<sup>1</sup> Investments bought, sold and held during the plan year ended September 30, 2007, appreciated (depreciated) in value by \$(1,454,795) as follows:

Amortized discount	\$217,426
Amortized premium	\$(1,672,221)
Gain (loss) on sale	<u>\$0</u>
	\$(1,454,795)

## Normal Cost

The aggregate entry-age normal cost percentage (NCP) is the level percentage of basic pay that must be contributed over the entire active career of a typical group of new entrants to pay for all the future retirement and survivor benefits of that group. It is determined by using the new-entrant cohort as the starting population in a GORGO projection. Their basic pay and benefits are projected over the next 100 years, and then discounted back to the present to find the NCP. Mathematically, a NCP is developed by dividing the present value of future benefits for the entire cohort by the present value of future basic pay.

As described in Appendix A, there are three distinct nondisability benefit formulas (relevant to three distinct populations) within the military retirement system. Retirement benefits are based on final basic pay (FINAL PAY) for military personnel who first became members of a uniformed service before September 8, 1980, and are based on the average of the highest 36 months (HI-3) for those becoming members on or after this date. Additionally, active duty military personnel who first became members of a uniformed service on or after August 1, 1986, are HI-3 unless they elect Career Status Bonus (CSB)/Redux, which provides them with a bonus in exchange for reduced Redux benefits.

Public Law 99-661, enacted in November 1986, mandated that two separate NCPs be used for the valuation of the military retirement system. One NCP is for active-duty personnel and full-time reservists (full-time) and one is for part-time reservists (part-time). Full-time and part-time NCPs are calculated for each of the three separate benefit formulas. The FY08 NCPs are summarized below:

<u>Benefit Formula</u>	<u>Full-Time</u>	<u>Part-Time</u>
FINAL PAY	41.6%	25.3%
HI-3	37.8	23.9
CSB/REDUX <sup>2</sup>	36.5	23.9

Public Law 108-136 required the Treasury to pay into the Fund at the beginning of each year the normal cost arising from increased benefits due to Concurrent Receipt. The NCPs shown above include both the Treasury and the DoD portion. DoD pays only a portion of the total NCP. The portion attributable to concurrent receipt benefits is paid by Treasury. Table 7 depicts the DoD and Treasury NCPs for FY08 separately.

Table 5 shows the expected percentage of the total basic payroll that will be paid during the fiscal year to all active duty personnel who entered a uniformed service since the beginning of fiscal year t-k, where k can take any value from 0 to 29. For example, during FY08 (t=2008), 3 percent of the expected basic payroll will be paid to personnel entering service in that fiscal year (k = 0), and 99 percent of the expected basic payroll will be paid to persons entering service since the beginning of FY81 (k = 27). The data and methodology used to derive this table are described in Appendix E.

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<sup>2</sup> This NCP represents a blend of NCPs for CSB/Redux and HI-3 benefit formulas based on the CSB/Redux Election Proportion (see Appendix F).

TABLE 5

PERCENTAGE OF TOTAL BASIC PAYROLL PAID DURING FISCAL YEAR  $t$  TO ALL ACTIVE  
DUTY PERSONNEL ENTERING SERVICE DURING OR AFTER SPECIFIC YEAR OF ENTRY

<u>Year of Entry</u>	<u>Percentage</u>
$t$	3%
$t-1$ or later	10
$t-2$ or later	18
$t-3$ or later	26
$t-4$ or later	32
$t-5$ or later	38
$t-6$ or later	43
$t-7$ or later	47
$t-8$ or later	52
$t-9$ or later	56
$t-10$ or later	60
$t-11$ or later	63
$t-12$ or later	67
$t-13$ or later	70
$t-14$ or later	74
$t-15$ or later	77
$t-16$ or later	80
$t-17$ or later	83
$t-18$ or later	86
$t-19$ or later	89
$t-20$ or later	92
$t-21$ or later	94
$t-22$ or later	95
$t-23$ or later	96
$t-24$ or later	97
$t-25$ or later	98
$t-26$ or later	98
$t-27$ or later	99
$t-28$ or later	99
$t-29$ or later	100

Based on basic payroll data for Fiscal Years 1987 to 1991, as described in Appendix E.

Thus, 99 percent of the basic payroll for FY08 is expected to be paid to personnel entering service since the beginning of FY81, while the remaining 1 percent of the expected basic payroll for FY08 will be for personnel whose retirement benefits are based on FINAL PAY.<sup>3</sup> Of the 99 percent associated with post-FY80 new entrants, 94.2 percent is expected to be attributable to the CSB/REDUX members (entering on or after August 1, 1986) and the remaining 4.8 percent to the HI-3 members. The 94.2 percent was derived by interpolating between the factors for FY86 (k = 22) and FY87 (k = 21) years of entry. The FY08 weighted aggregate full- and part-time NCPs are obtained by weighting their respective NCPs for the CSB/REDUX formula by 94.2 percent, the normal cost percentages for the HI-3 formula by 4.8 percent, and the normal cost percentages for the FINAL PAY formula by 1.0 percent. The resulting sum of the DoD and Treasury components of the weighted aggregate full-time NCP is 36.6 percent, and the weighted aggregate part-time NCP is 23.9 percent. Due to federal budget deadlines, the two normal cost percentages used to determine the actual contributions to the Fund must be established in advance of implementation and may vary from those actually derived in a valuation.

Table 6 summarizes the components of the FY08 normal cost percentages.

TABLE 6  
NORMAL COST AS A PERCENT OF BASIC PAY

<u>FULL-TIME</u>	<u>FINAL PAY</u>	<u>HI-3</u>	<u>CSB/REDUX</u>	<u>FY08 Weighted</u>
Nondisability benefits	39.4%	35.8%	34.6%	34.7%
Disability benefits	0.8	0.7	0.7	0.7
Survivor benefits	<u>1.4</u>	<u>1.3</u>	<u>1.2</u>	<u>1.2</u>
Total	41.6%	37.8%	36.5%	36.6%
<u>PART-TIME</u>				
Nondisability benefits	23.1%	21.9%	21.9%	21.9%
Disability benefits	0.0	0.0	0.0	0.0
Survivor benefits	<u>2.1</u>	<u>2.0</u>	<u>2.0</u>	<u>2.0</u>
Total	25.3%	23.9%	23.9%	23.9%

Note that columns may not add exactly due to rounding.

\*\*\* Refer to Table 7 for the breakdown of the normal cost between the DoD and Treasury. \*\*\*

<sup>3</sup> Personnel hired before September 8, 1980, have their retirement benefits based on FINAL PAY, but for purposes of determining the weights in the weighted NCP, we use personnel hired before October 1, 1980.

As can be determined from this table, about 95 percent of the full-time normal cost stems from nondisability retirement. Based on current decrement rates, 17 percent of a typical group of new entrants attains 20 years of active duty service and becomes eligible for nondisability retirement from active duty. Specifically, 47 percent of new officers and 15 percent of new enlistees attain 20 years of active duty service.<sup>4</sup> It should be noted that some military personnel who begin their careers on active duty move to the reserves and retire from there.

Table 10 lists in the normal cost columns the projected weighted aggregate full-time and part-time NCPs under current law for each year in the future. The columns are separated into the DoD and Treasury NCPs due to Public Law 108-136, which requires the Department of Treasury to pay for the normal cost resulting from the increase in benefits due to Concurrent Receipt. By 2016, both the full-time and part-time sum of the DoD and Treasury components of the weighted aggregate percentages drop to the level of the REDUX normal cost percentages [full-time 36.5 percent ( $36.5 = 29.4 + 7.1$ ); part-time 23.9 percent ( $23.9 = 21.2 + 2.7$ )] since by that time virtually all non-retired personnel will have entered the uniformed service after August 1, 1986 (the above figures may not add due to rounding).

### **Amortization of Unfunded Liability**

Under Public Law 98-94, normal cost contributions began to be made by DoD on behalf of all military personnel on October 1, 1984. Since normal cost contributions had not been made for service prior to this date, there was an initial unfunded accrued liability, or “initial unfunded liability,” as of September 30, 1984, of \$528.7 billion. If this amount had been deposited in the retirement fund on September 30, 1984, then it, together with the future normal cost payments to be made on behalf of all active duty personnel and drilling reservists over the balance of their active careers, and investment earnings at the assumed rate, would have been sufficient to provide all expected retirement and survivor benefits for those in the system on that date.

The Board of Actuaries originally determined that the initial unfunded accrued liability of the system (\$528.7 billion) should be amortized with payments equal to 33 percent of the second preceding fiscal year’s basic payroll. It was originally projected that this method would amortize the initial unfunded liability over 60 years. However, economic assumption changes extended the amortization period well beyond 60 years. As a result, the Board revised the amortization

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<sup>4</sup> As in past valuation reports, these percentages are stated from the perspective of a member still in active service upon reaching his or her first fiscal-year boundary (i.e., September 30). If losses prior to the first fiscal-year boundary are taken into account, the percentages would be reduced by approximately 15 percent. The stated percentages also reflect the effect of reentrants, i.e., members who appear in the active duty population one year without having been there the year before, who are not new entrants. Without the effect of reentrants, the proportion of a typical group of new entrants who attain 20 years of active duty service is reduced from 17 percent to 14 percent.

method of the original unfunded liability in such a way that the amortization would have been completed in 2043. In more recent years, it was determined that the Military Retirement Fund was projected to have a negative balance for several years before becoming positive again. The Board decided to shorten the amortization period to 50 years in 1996. The Board again shortened the amortization period in 2007 to 42 years in order for the payments to cover the interest on the unfunded liability each year. The initial unfunded liability is now expected to be fully amortized in 2025.

Changes in the unfunded liability can also arise because of modifications to benefit provisions, changes in actuarial assumptions, and deviations in actual experience from expected experience (gains and losses). The Board approved a method to amortize these changes over 30 years by payments that increase in absolute value at the same rate as the annual long-term basic pay scale assumption (currently 3.75 percent). A detailed description of the methods used to calculate the payment streams for changes in unfunded liability is in Appendix N.

### **Unfunded Accrued Liability as of September 30, 2007**

Table 7 summarizes the calculation of the unfunded accrued liability as of September 30, 2007. The present value of future benefits is obtained by projecting future benefits for the total covered population (closed group with no new entrants) as of September 30, 2007, and discounting these benefits back to the present. The GORGO projection model projects benefits for the current active and retired populations over the rest of their lifetimes. Due to recent law changes, additional adjustments to the pay projections are made outside of GORGO. The initial retirement benefits for military personnel are based on their total projected service at retirement, the applicable benefit formula, and projected basic pay increases. Subsequent retirement benefits include projected cost-of-living adjustments and the age 62 adjustment for those retiring under the CSB/REDUX formula.

The present value of future normal cost contributions is obtained by (1) using GORGO to project future yearly full-time and part-time basic pay for the September 30, 2007, covered population, (2) multiplying the pay by the total projected (DoD and Treasury) full-time and part-time weighted aggregate entry-age NCPs, and (3) discounting the resulting normal costs back to September 30, 2007. For this closed group, the relative percentages of basic pay subject to the three separate benefit formulas will change over time as fewer and fewer members are covered under the Final Pay formula. The *weighted* full- and part-time NCPs that are multiplied against the future full- or part-time pay in each year reflect expected changing percentages of pay going to members covered by the three benefit formulas. This weighted procedure is roughly equivalent in the aggregate to projecting separately the pay of each of the six groups of active duty and selected reserve members and multiplying it by the individual group's NCP.

The sum of the DoD and Treasury components of the weighted aggregate entry-age normal cost percentages for FY08 are 36.6 percent full-time and 23.9 percent part-time. Federal budget deadlines require the establishment of normal cost percentages in advance of the valuation. Consequently, the percentages actually implemented in a fiscal year may vary from those derived in the valuation. These differences, which are small unless major actuarial

assumptions are changed, are reflected in the unfunded liability by using the implemented normal cost in the first year of the projection.

Deducting the present value of future normal costs and the amortized cost value of the Fund from the present value of future benefits leaves an unfunded liability of \$824.0 billion as of September 30, 2007. This was 5 percent more than the expected unfunded liability of \$783.6 billion. The expected unfunded liability is what the unfunded liability would have been if all actuarial assumptions had been realized and all benefit formulas had remained unchanged. The fact that the actual unfunded liability is more than expected means that there was a total FY07 loss of \$40.4 billion (\$783.6 billion minus \$824.0 billion). The components of this loss are outlined in Table 8. The total experience loss is divided into four segments: (1) the loss due to the difference between the actual interest rate earned (4.7%) by the fund and the assumed interest rate (6.0%); (2) the gain due to the actual COLA (2.3%) increase being different from that assumed (3.0%); (3) the gain due to the actual salary (3.5%) increase being different from that assumed (3.75%); and (4) the loss due to differences between all non-economic assumptions and the actual experience for the year. See the Summary of Changes for the September 30, 2007, Valuation for a more detailed discussion of the actuarial assumptions and benefit changes gains and losses outlined in Table 8.



TABLE 7

MILITARY RETIREMENT SYSTEM  
ACTUARIAL STATUS INFORMATION  
AS OF SEPTEMBER 30, 2007  
(\$ in billions)

		For the Plan Year Ended September 30, 2007
1.	Present value of future benefits	
	a.    Annuitants now on roll	\$677.3
	b.    Nonretired reservists	\$134.3
	c.    Active duty personnel <sup>1</sup>	<u>\$396.9</u>
	TOTAL	\$1,208.6
2.	Present value of future normal cost contributions	\$166.3
3.	Actuarial accrued liability	\$1,042.3
4.	Actuarial value of assets <sup>2</sup>	\$218.2
5.	Unfunded accrued liability	\$824.0
6.	DoD normal cost percentage (NCP) <sup>3</sup> to be applied to basic pay in the following fiscal year	
	a. Full-time	29.5%
	b. Part-time	21.2%
7.	Treasury normal cost percentage (NCP) <sup>4</sup> to be applied to basic pay in the following fiscal year	
	a. Full-time	7.1%
	b. Part-time	2.7%

Basic pay is only a portion of active duty military compensation. See the Summary of the Military Retirement System (Appendix A) for details.

<sup>1</sup> The future benefits of active duty personnel expected to retire as reservists are counted on line 1.b.

<sup>2</sup> The actuarial value of assets is determined using the amortized cost method from Table 4.

<sup>3</sup> Due to the need to establish the NCPs in advance of implementation (federal budget deadlines), the percentages actually used in a fiscal year may vary from the ones derived in the valuation and displayed here.

<sup>4</sup> Public Law 108-136 requires the Department of Treasury to pay the normal cost resulting from the increase in benefits due to Concurrent Receipt.

TABLE 8  
FY07 CHANGE IN UNFUNDED LIABILITY  
(\$ in billions)

		For the Plan Year Ended September 30, 2007	
1.	Actual unfunded accrued liability (9/30/07)	\$824.0	
2.	Expected unfunded accrued liability (9/30/07)	\$783.6	
3.	Total gain/(loss)	(\$40.4)	3.9%
a.	Total experience gain/(loss)	\$0.1	0.0%
	Interest assumption	(\$2.9)	1.3%
	COLA assumption	\$4.5	0.4%
	Salary assumption	\$0.8	0.1%
	Non-economic assumptions	(\$2.3)	0.2%
b.	Total benefit change gain/(loss) (NDA 2008 – Public Law 110-181)	(\$7.6)	0.7%
	Combat-Related Disability Expansion (section 641)	(\$1.0)	0.1%
	Acceleration of VA ‘Unemployables’ (section 642)	(\$0.8)	0.1%
	DIC Supplement (section 644)	(\$0.3)	0.0%
	Early Reserve Retirement (section 647)	(\$5.6)	0.5%
c.	Total assumption change gain/(loss)	(\$32.9)	3.2%
	New Pay Table (April 1, 2007)	(\$0.6)	0.1%
	New Non-disability Death/Non-death Loss Rates	\$18.0)	1.7%
	New Retired Pay Factors	(\$11.7)	1.1%
	Death on Active Duty Refinement	\$0.1	0.0%
	New Survivor Rates and Parameters	\$0.7	0.1%
	VA Full Offset Valuation Refinement	(\$0.6)	0.1%
	Reserve Retirement Valuation Refinement	(\$2.8)	0.3%

(Starting with the FY06 report, percentages shown are ratios of absolute values of each gain or loss component to the accrued liability (Table 7, line 3), except the percentage given for the experience gain/(loss) due to the interest assumption: it is the ratio of the gain or loss to the actuarial value of assets (Table 7, line 4). In this table, negative values represent actuarial losses.)

These changes in unfunded liability were used to calculate the October 1, 2008, unfunded liability payment. The total payment was determined to be \$51,125 million. This total payment includes (1) a payment of \$69,213 million to amortize the original unfunded liability, less (2) an amount of \$5,076 million to amortize changes in actuarial assumptions, plus (3) an amount of \$7,026 million to amortize benefit changes, less (4) an amount of \$20,038 million to amortize total combined experience gains and losses through FY07. The detailed calculations of these payment components are located in Appendix N. Tables 11 and 12 show the projection of the unfunded liability payments and unfunded liability balances. Tables 9 and 10 display all projected transactions to the Fund.

Starting in FY05, the total payment to be made by Treasury includes, in addition to the unfunded liability amortization amount, the amount required by Public Law 108-136 to pay for the increased normal cost due to Concurrent Receipt benefits. This amount is \$3,745 million for FY09; thus, the total Treasury payment on October 1, 2008, is \$54,870 million (= \$51,125 million + \$3,745 million). Detailed calculations of the total Treasury payment are also located in Appendix N.

Other measures of a retirement system's liabilities (required for private sector plans under GAAP) are the "Accumulated Plan Benefits" and the "Market Value of Assets." In prior years, both these items and explanatory notes were included in Appendix L. Starting in FY07, only the "Market Value of Assets" will be shown for informational purposes.

TABLE 9

**MILITARY RETIREMENT SYSTEM**  
**PAST AND PROJECTED FLOW OF PLAN ASSETS**  
(In Billions of Dollars and as a Proportion of Payroll)

Fiscal Year	Basic Payroll <sup>2</sup>	Normal Cost Payments <sup>3</sup>	Amortization of Unfunded Liability <sup>4</sup>	Investment Income	Fund Disbursements <sup>5</sup>	Fund Balance End of Year <sup>6</sup>
1985	\$33.5	\$17.0 (0.507)	\$9.5 (0.284)	\$1.1 (0.033)	\$15.8 (0.472)	\$11.8 (0.352)
1986	\$35.4	\$17.4 (0.492)	\$10.5 (0.297)	\$2.5 (0.071)	\$17.6 (0.497)	\$24.6 (0.695)
1987	\$36.4	\$18.3 (0.503)	\$10.5 (0.288)	\$3.6 (0.099)	\$18.1 (0.497)	\$38.9 (1.069)
1988	\$37.3	\$18.4 (0.493)	\$10.3 (0.276)	\$5.1 (0.137)	\$17.5 (0.469)	\$53.4 (1.432)
1989	\$38.6	\$18.5 (0.479)	\$9.8 (0.254)	\$6.1 (0.158)	\$20.2 (0.523)	\$67.6 (1.751)
1990	\$39.8	\$16.3 (0.410)	\$10.6 (0.266)	\$7.3 (0.183)	\$21.5 (0.540)	\$80.4 (2.020)
1991	\$42.3	\$17.2 (0.407)	\$10.8 (0.255)	\$8.5 (0.201)	\$23.1 (0.546)	\$93.7 (2.215)
1992	\$41.1	\$16.3 (0.397)	\$11.2 (0.273)	\$9.4 (0.229)	\$24.5 (0.596)	\$106.1 (2.582)
1993	\$38.9	\$13.2 (0.339)	\$12.3 (0.316)	\$10.0 (0.257)	\$25.7 (0.661)	\$115.9 (2.979)
1994	\$38.3	\$12.8 (0.334)	\$11.9 (0.311)	\$10.3 (0.269)	\$26.7 (0.697)	\$124.2 (3.243)
1995	\$37.1	\$12.2 (0.329)	\$11.5 (0.310)	\$10.9 (0.294)	\$27.8 (0.749)	\$131.0 (3.531)
1996	\$36.7	\$11.2 (0.305)	\$10.7 (0.292)	\$11.2 (0.305)	\$28.8 (0.785)	\$135.3 (3.687)
1997	\$36.8	\$11.1 (0.302)	\$15.2 (0.413)	\$11.9 (0.323)	\$30.2 (0.821)	\$143.3 (3.894)
1998	\$37.1	\$10.5 (0.283)	\$15.1 (0.407)	\$12.2 (0.329)	\$31.1 (0.838)	\$149.9 (4.040)
1999	\$37.6	\$10.5 (0.279)	\$15.3 (0.407)	\$12.3 (0.327)	\$31.9 (0.848)	\$156.0 (4.149)
2000	\$39.0	\$11.5 (0.295)	\$15.3 (0.392)	\$12.6 (0.323)	\$32.8 (0.841)	\$162.7 (4.172)
2001	\$40.9	\$11.4 (0.279)	\$16.1 (0.394)	\$13.1 (0.320)	\$34.1 (0.834)	\$169.2 (4.137)
2002	\$44.7	\$12.9 (0.289)	\$17.0 (0.380)	\$12.4 (0.277)	\$35.1 (0.785)	\$176.5 (3.949)
2003	\$52.0	\$13.7 (0.263)	\$17.9 (0.344)	\$10.0 (0.192)	\$35.6 (0.685)	\$182.6 (3.512)
2004	\$53.6	\$14.1 (0.263)	\$18.2 (0.340)	\$10.1 (0.188)	\$37.0 (0.690)	\$188.0 (3.507)
2005	\$56.3	\$16.6 (0.295)	\$21.4 (0.380)	\$10.9 (0.194)	\$39.0 (0.693)	\$197.9 (3.515)
2006	\$54.0	\$16.2 (0.300)	\$23.2 (0.430)	\$12.3 (0.228)	\$41.1 (0.761)	\$208.4 (3.859)
2007	\$56.4	\$16.9 (0.300)	\$26.0 (0.462)	\$10.3 (0.183)	\$43.5 (0.771)	\$218.2 (3.869)

TABLE 9 (cont.)

**MILITARY RETIREMENT SYSTEM**  
**PAST AND PROJECTED FLOW OF PLAN ASSETS<sup>1</sup>**  
(In Billions of Dollars and as a Proportion of Payroll)

Fiscal Year	Basic Payroll <sup>2</sup>	Normal Cost Payments <sup>3</sup>		Amortization of Unfunded Liability <sup>4</sup>		Investment Income		Fund Disbursements <sup>5</sup>		Fund Balance End of Year <sup>6</sup>	
2008	\$54.5	\$17.8	(0.327)	\$46.2	(0.848)	\$15.1	(0.277)	\$46.6	(0.855)	\$250.8	(4.602)
2009	\$56.1	\$19.7	(0.351)	\$51.1	(0.911)	\$17.3	(0.308)	\$48.6	(0.866)	\$290.3	(5.175)
2010	\$58.1	\$20.5	(0.353)	\$53.0	(0.912)	\$19.8	(0.341)	\$50.4	(0.867)	\$333.2	(5.735)
2011	\$60.2	\$21.2	(0.352)	\$55.0	(0.914)	\$22.5	(0.374)	\$51.9	(0.862)	\$380.1	(6.314)
2012	\$62.5	\$22.0	(0.352)	\$57.1	(0.914)	\$25.4	(0.406)	\$53.3	(0.853)	\$431.3	(6.901)
2013	\$64.8	\$22.8	(0.352)	\$59.2	(0.914)	\$28.6	(0.441)	\$55.0	(0.849)	\$487.0	(7.515)
2014	\$67.1	\$23.7	(0.353)	\$61.5	(0.917)	\$32.0	(0.477)	\$56.6	(0.844)	\$547.6	(8.161)
2015	\$69.6	\$24.5	(0.352)	\$63.8	(0.917)	\$35.8	(0.514)	\$58.0	(0.833)	\$613.6	(8.816)
2016	\$72.2	\$25.4	(0.352)	\$66.2	(0.917)	\$39.9	(0.553)	\$59.5	(0.824)	\$685.6	(9.496)
2017	\$74.8	\$26.4	(0.353)	\$68.6	(0.917)	\$44.3	(0.592)	\$61.4	(0.821)	\$763.5	(10.207)
2018	\$77.4	\$27.3	(0.353)	\$71.2	(0.920)	\$49.1	(0.634)	\$63.4	(0.819)	\$847.7	(10.952)
2019	\$80.1	\$28.2	(0.352)	\$73.9	(0.923)	\$54.3	(0.678)	\$65.6	(0.819)	\$938.6	(11.718)
2020	\$82.9	\$29.2	(0.352)	\$76.6	(0.924)	\$59.9	(0.723)	\$67.8	(0.818)	\$1,036.6	(12.504)
2021	\$85.8	\$30.2	(0.352)	\$79.5	(0.927)	\$65.9	(0.768)	\$70.1	(0.817)	\$1,142.2	(13.312)
2022	\$88.8	\$31.3	(0.352)	\$82.5	(0.929)	\$72.4	(0.815)	\$72.4	(0.815)	\$1,256.0	(14.144)
2023	\$91.9	\$32.3	(0.351)	\$85.6	(0.931)	\$79.4	(0.864)	\$74.8	(0.814)	\$1,378.5	(15.000)
2024	\$95.0	\$33.4	(0.352)	\$88.8	(0.935)	\$86.9	(0.915)	\$77.4	(0.815)	\$1,510.2	(15.897)
2025	\$98.4	\$34.6	(0.352)	\$125.6	(1.276)	\$97.0	(0.986)	\$79.9	(0.812)	\$1,687.6	(17.150)
2026	\$102.0	\$35.9	(0.352)	\$133.1	(1.305)	\$108.0	(1.059)	\$82.3	(0.807)	\$1,882.2	(18.453)
2027	\$105.8	\$37.2	(0.352)	\$3.8	(0.036)	\$111.9	(1.058)	\$84.9	(0.802)	\$1,950.3	(18.434)
2028	\$109.7	\$38.6	(0.352)	\$3.9	(0.036)	\$116.0	(1.057)	\$87.8	(0.800)	\$2,021.0	(18.423)
2029	\$113.8	\$40.0	(0.351)	\$4.9	(0.043)	\$120.3	(1.057)	\$90.8	(0.798)	\$2,095.5	(18.414)
2030	\$118.0	\$41.5	(0.352)	\$15.2	(0.129)	\$125.3	(1.062)	\$93.7	(0.794)	\$2,183.8	(18.507)
2031	\$122.4	\$43.1	(0.352)	\$15.8	(0.129)	\$130.6	(1.067)	\$96.7	(0.790)	\$2,276.5	(18.599)
2032	\$126.9	\$44.7	(0.352)	\$16.4	(0.129)	\$136.2	(1.073)	\$99.9	(0.787)	\$2,373.9	(18.707)
2033	\$131.7	\$46.3	(0.352)	\$17.0	(0.129)	\$142.0	(1.078)	\$103.1	(0.783)	\$2,476.0	(18.800)
2034	\$136.6	\$48.1	(0.352)	\$17.6	(0.129)	\$148.1	(1.084)	\$106.5	(0.780)	\$2,583.4	(18.912)
2035	\$141.8	\$49.9	(0.352)	\$1.0	(0.007)	\$153.5	(1.083)	\$110.0	(0.776)	\$2,677.7	(18.884)
2036	\$147.1	\$51.7	(0.351)	\$0.0	0.000	\$159.1	(1.082)	\$113.6	(0.772)	\$2,775.0	(18.865)
2037	\$152.6	\$53.7	(0.352)	\$0.0	0.000	\$164.9	(1.081)	\$117.3	(0.769)	\$2,876.3	(18.849)
2038	\$158.4	\$55.7	(0.352)	\$0.0	0.000	\$170.9	(1.079)	\$121.2	(0.765)	\$2,981.8	(18.824)
2039	\$164.3	\$57.8	(0.352)	\$0.0	0.000	\$177.2	(1.079)	\$125.2	(0.762)	\$3,091.6	(18.817)
2040	\$170.4	\$59.9	(0.352)	\$0.0	0.000	\$183.7	(1.078)	\$129.3	(0.759)	\$3,205.9	(18.814)
2041	\$176.8	\$62.2	(0.352)	\$0.0	0.000	\$190.5	(1.077)	\$133.7	(0.756)	\$3,325.0	(18.807)
2042	\$183.4	\$64.5	(0.352)	\$0.0	0.000	\$197.6	(1.077)	\$138.2	(0.754)	\$3,449.0	(18.806)
2043	\$190.2	\$66.9	(0.352)	\$0.0	0.000	\$205.0	(1.078)	\$142.9	(0.751)	\$3,578.0	(18.812)
2044	\$197.3	\$69.4	(0.352)	\$0.0	0.000	\$212.7	(1.078)	\$147.7	(0.749)	\$3,712.4	(18.816)
2045	\$204.7	\$72.0	(0.352)	\$0.0	0.000	\$220.7	(1.078)	\$152.8	(0.746)	\$3,852.3	(18.819)
2046	\$212.3	\$74.7	(0.352)	\$0.0	0.000	\$229.0	(1.079)	\$158.1	(0.745)	\$3,997.9	(18.831)
2047	\$220.3	\$77.5	(0.352)	\$0.0	0.000	\$237.7	(1.079)	\$163.6	(0.743)	\$4,149.6	(18.836)
2048	\$228.5	\$80.4	(0.352)	\$0.0	0.000	\$246.7	(1.080)	\$169.2	(0.740)	\$4,307.5	(18.851)
2049	\$237.1	\$83.4	(0.352)	\$0.0	0.000	\$256.1	(1.080)	\$175.1	(0.739)	\$4,471.9	(18.861)
2050	\$246.0	\$86.5	(0.352)	\$0.0	0.000	\$265.9	(1.081)	\$181.3	(0.737)	\$4,643.1	(18.874)
2051	\$255.2	\$89.8	(0.352)	\$0.0	0.000	\$276.1	(1.082)	\$187.7	(0.736)	\$4,821.3	(18.892)
2052	\$264.8	\$93.1	(0.352)	\$0.0	0.000	\$286.7	(1.083)	\$194.3	(0.734)	\$5,006.9	(18.908)
2053	\$274.8	\$96.6	(0.352)	\$0.0	0.000	\$297.8	(1.084)	\$201.3	(0.733)	\$5,200.0	(18.923)
2054	\$285.1	\$100.3	(0.352)	\$0.0	0.000	\$309.3	(1.085)	\$208.5	(0.731)	\$5,401.0	(18.944)
2055	\$295.8	\$104.0	(0.352)	\$0.0	0.000	\$321.3	(1.086)	\$216.1	(0.731)	\$5,610.2	(18.966)
2056	\$306.9	\$107.9	(0.352)	\$0.0	0.000	\$333.7	(1.087)	\$224.0	(0.730)	\$5,827.9	(18.990)
2057	\$318.4	\$112.0	(0.352)	\$0.0	0.000	\$346.7	(1.089)	\$232.2	(0.729)	\$6,054.4	(19.015)

TABLE 9 (cont.)

**MILITARY RETIREMENT SYSTEM**  
**PAST AND PROJECTED FLOW OF PLAN ASSETS<sup>1</sup>**  
(In Billions of Dollars and as a Proportion of Payroll)

Fiscal Year	Basic Payroll <sup>2</sup>	Normal Cost Payments <sup>3</sup>		Amortization of Unfunded Liability <sup>4</sup>		Investment Income		Fund Disbursements <sup>5</sup>		Fund Balance End of Year <sup>6</sup>	
2058	\$330.4	\$116.2	(0.352)	\$0.0	0.000	\$360.2	(1.090)	\$240.8	(0.729)	\$6,290.0	(19.038)
2059	\$342.8	\$120.6	(0.352)	\$0.0	0.000	\$374.2	(1.092)	\$249.7	(0.728)	\$6,535.0	(19.064)
2060	\$355.7	\$125.1	(0.352)	\$0.0	0.000	\$388.8	(1.093)	\$259.1	(0.728)	\$6,789.8	(19.089)
2061	\$369.0	\$129.8	(0.352)	\$0.0	0.000	\$403.9	(1.095)	\$268.9	(0.729)	\$7,054.6	(19.118)
2062	\$382.9	\$134.7	(0.352)	\$0.0	0.000	\$419.7	(1.096)	\$279.1	(0.729)	\$7,329.9	(19.143)
2063	\$397.2	\$139.7	(0.352)	\$0.0	0.000	\$436.0	(1.098)	\$289.7	(0.729)	\$7,615.9	(19.174)
2064	\$412.1	\$145.0	(0.352)	\$0.0	0.000	\$453.1	(1.099)	\$300.9	(0.730)	\$7,913.1	(19.202)
2065	\$427.6	\$150.4	(0.352)	\$0.0	0.000	\$470.7	(1.101)	\$312.5	(0.731)	\$8,221.7	(19.228)
2066	\$443.6	\$156.0	(0.352)	\$0.0	0.000	\$489.1	(1.103)	\$324.6	(0.732)	\$8,542.2	(19.257)
2067	\$460.2	\$161.9	(0.352)	\$0.0	0.000	\$508.2	(1.104)	\$337.2	(0.733)	\$8,875.1	(19.285)
2068	\$477.5	\$167.9	(0.352)	\$0.0	0.000	\$527.9	(1.106)	\$350.3	(0.734)	\$9,220.6	(19.310)
2069	\$495.4	\$174.2	(0.352)	\$0.0	0.000	\$548.5	(1.107)	\$364.0	(0.735)	\$9,579.3	(19.336)
2070	\$514.0	\$180.8	(0.352)	\$0.0	0.000	\$569.8	(1.109)	\$378.2	(0.736)	\$9,951.6	(19.361)
2071	\$533.2	\$187.5	(0.352)	\$0.0	0.000	\$592.0	(1.110)	\$393.0	(0.737)	\$10,338.1	(19.389)
2072	\$553.2	\$194.6	(0.352)	\$0.0	0.000	\$614.9	(1.112)	\$408.4	(0.738)	\$10,739.1	(19.413)
2073	\$573.9	\$201.9	(0.352)	\$0.0	0.000	\$638.8	(1.113)	\$424.4	(0.740)	\$11,155.3	(19.438)
2074	\$595.5	\$209.4	(0.352)	\$0.0	0.000	\$663.5	(1.114)	\$441.1	(0.741)	\$11,587.2	(19.458)
2075	\$617.8	\$217.3	(0.352)	\$0.0	0.000	\$689.2	(1.116)	\$458.3	(0.742)	\$12,035.4	(19.481)
2076	\$641.0	\$225.4	(0.352)	\$0.0	0.000	\$715.8	(1.117)	\$476.3	(0.743)	\$12,500.4	(19.501)
2077	\$665.0	\$233.9	(0.352)	\$0.0	0.000	\$743.5	(1.118)	\$494.9	(0.744)	\$12,982.8	(19.523)
2078	\$689.9	\$242.7	(0.352)	\$0.0	0.000	\$772.1	(1.119)	\$514.2	(0.745)	\$13,483.4	(19.544)
2079	\$715.8	\$251.8	(0.352)	\$0.0	0.000	\$801.9	(1.120)	\$534.3	(0.746)	\$14,002.8	(19.562)
2080	\$742.7	\$261.2	(0.352)	\$0.0	0.000	\$832.8	(1.121)	\$555.2	(0.748)	\$14,541.6	(19.579)
2081	\$770.5	\$271.0	(0.352)	\$0.0	0.000	\$864.8	(1.122)	\$576.8	(0.749)	\$15,100.6	(19.598)
2082	\$799.5	\$281.2	(0.352)	\$0.0	0.000	\$898.0	(1.123)	\$599.2	(0.749)	\$15,680.6	(19.613)
2083	\$829.4	\$291.7	(0.352)	\$0.0	0.000	\$932.5	(1.124)	\$622.5	(0.751)	\$16,282.3	(19.631)
2084	\$860.6	\$302.7	(0.352)	\$0.0	0.000	\$968.3	(1.125)	\$646.7	(0.751)	\$16,906.5	(19.645)
2085	\$892.8	\$314.0	(0.352)	\$0.0	0.000	\$1,005.4	(1.126)	\$671.8	(0.752)	\$17,554.0	(19.662)
2086	\$926.3	\$325.8	(0.352)	\$0.0	0.000	\$1,043.8	(1.127)	\$697.9	(0.753)	\$18,225.8	(19.676)
2087	\$961.1	\$338.0	(0.352)	\$0.0	0.000	\$1,083.8	(1.128)	\$724.9	(0.754)	\$18,922.7	(19.689)
2088	\$997.1	\$350.7	(0.352)	\$0.0	0.000	\$1,125.2	(1.128)	\$753.0	(0.755)	\$19,645.7	(19.703)
2089	\$1,034.5	\$363.9	(0.352)	\$0.0	0.000	\$1,168.2	(1.129)	\$782.1	(0.756)	\$20,395.6	(19.715)
2090	\$1,073.3	\$377.5	(0.352)	\$0.0	0.000	\$1,212.7	(1.130)	\$812.4	(0.757)	\$21,173.5	(19.727)
2091	\$1,113.6	\$391.7	(0.352)	\$0.0	0.000	\$1,259.0	(1.131)	\$843.8	(0.758)	\$21,980.3	(19.738)
2092	\$1,155.3	\$406.3	(0.352)	\$0.0	0.000	\$1,306.9	(1.131)	\$876.4	(0.759)	\$22,817.2	(19.750)
2093	\$1,198.6	\$421.6	(0.352)	\$0.0	0.000	\$1,356.7	(1.132)	\$910.3	(0.759)	\$23,685.1	(19.761)
2094	\$1,243.6	\$437.4	(0.352)	\$0.0	0.000	\$1,408.2	(1.132)	\$945.5	(0.760)	\$24,585.2	(19.769)
2095	\$1,290.2	\$453.8	(0.352)	\$0.0	0.000	\$1,461.7	(1.133)	\$982.0	(0.761)	\$25,518.7	(19.779)
2096	\$1,338.6	\$470.8	(0.352)	\$0.0	0.000	\$1,517.2	(1.133)	\$1,020.0	(0.762)	\$26,486.7	(19.787)
2097	\$1,388.8	\$488.5	(0.352)	\$0.0	0.000	\$1,574.7	(1.134)	\$1,059.4	(0.763)	\$27,490.5	(19.794)
2098	\$1,440.9	\$506.8	(0.352)	\$0.0	0.000	\$1,634.4	(1.134)	\$1,100.3	(0.764)	\$28,531.4	(19.801)
2099	\$1,494.9	\$525.8	(0.352)	\$0.0	0.000	\$1,696.2	(1.135)	\$1,142.8	(0.764)	\$29,610.5	(19.808)
2100	\$1,551.0	\$545.5	(0.352)	\$0.0	0.000	\$1,760.3	(1.135)	\$1,187.0	(0.765)	\$30,729.4	(19.813)
2101	\$1,609.1	\$566.0	(0.352)	\$0.0	0.000	\$1,826.8	(1.135)	\$1,232.8	(0.766)	\$31,889.4	(19.818)
2102	\$1,669.5	\$587.2	(0.352)	\$0.0	0.000	\$1,895.7	(1.135)	\$1,280.4	(0.767)	\$33,091.9	(19.821)
2103	\$1,732.1	\$609.2	(0.352)	\$0.0	0.000	\$1,967.2	(1.136)	\$1,329.9	(0.768)	\$34,338.4	(19.825)
2104	\$1,797.0	\$632.0	(0.352)	\$0.0	0.000	\$2,041.3	(1.136)	\$1,381.2	(0.769)	\$35,630.5	(19.828)
2105	\$1,864.4	\$655.8	(0.352)	\$0.0	0.000	\$2,118.0	(1.136)	\$1,434.5	(0.769)	\$36,969.8	(19.829)
2106	\$1,934.4	\$680.3	(0.352)	\$0.0	0.000	\$2,197.6	(1.136)	\$1,489.9	(0.770)	\$38,357.9	(19.829)

## FOOTNOTES FOR TABLE 9

- <sup>1</sup> Public Law 98-94 established the military retirement fund. Under the law, DoD is responsible for the normal cost payment and Treasury is responsible for the payments on the unfunded liability. Public Law 108-136 assigned Treasury the responsibility of funding the normal cost resulting from increased benefits due to Concurrent Receipt, starting in FY05. There are no employee contributions to the fund.
- <sup>2</sup> DoD-projected endstrengths are used through FY13 and constant force strengths thereafter. Basic pay is only a portion of military compensation. See the Summary of the Military Retirement System in Appendix A for details.
- <sup>3</sup> Due to federal budget deadlines, normal cost percentages are established in advance of implementation. The percentage actually used and displayed here may vary from the one derived in the valuation as of the end of the previous year. Starting in FY87, NCPs have been developed separately for the full-time and part-time basic payrolls. Beginning in FY05, Normal Cost Payments combine DoD and Treasury amounts. See Table 10 for the DoD/Treasury breakdown.
- <sup>4</sup> Reflects amortization payments for FY09 and thereafter determined in the September 30, 2007, valuation.
- <sup>5</sup> Disbursements are on a cash basis. Beginning in December 1984, entitlements obligated for a month have been paid at the beginning of the following month. Prior to this date, entitlements were paid at the end of the month of obligation. Consequently, FY85 disbursements include only 11 months of payments.
- <sup>6</sup> This fund balance (on a book value basis) reflects cash disbursements during the year. On September 30, 2007, assets in the fund totaled \$218.2 billion.

NOTE: Mortality rates that are applied in the valuation to active duty members, nondisabled retirees, and survivors, are subject to improvement over time. See Appendix J for details.

### ANNUAL ECONOMIC ASSUMPTIONS USED IN PROJECTIONS OF PLAN ASSETS

<u>Fiscal Year</u>	<u>Full COLA</u>	<u>Basic Pay</u>	<u>Interest</u>
2008	2.3	3.5	6.00
2009	4.1	3.9	6.00
2010-11	2.2	3.9	6.00
2012-16	2.3	3.9	6.00
2017	3.0	3.9	6.00
2018+	3.0	3.75	6.00

Full COLA is equal to full cost-of-living increases to retiree and survivor annuities. Basic Pay is equal to the non-promotion-and-merit increases to basic pay. They are applied on an across-the-board basis and typically occur each January 1<sup>st</sup>. Interest assumptions pertain to interest income for the entire portfolio in a fiscal year. The above COLA and Basic Pay assumptions are from the Office of Management and Budget (OMB); the interest (fund yield) is the Board of Actuaries long-term interest assumption. Long-term annual economic assumptions (used throughout the projection in the normal cost and unfunded liability calculations) are 3.0% COLA, 3.75% basic pay and 6.00% interest.

TABLE 10

**MILITARY RETIREMENT SYSTEM**  
**PROJECTED PAYROLL AND NORMAL COST PAYMENTS**  
(In Billions of Dollars and as a Proportion of Payroll)

Fiscal Year	Payroll			DoD Normal Cost Payments				Treasury Normal Cost Payments				Normal Cost Payments	
	Full-Time	Part-Time	Total	Full-Time		Part-Time		Full-Time		Part-Time		Total	
2008	\$49.2	\$5.3	\$54.5	\$14.3	(0.290)	\$1.0	(0.191)	\$2.5	(0.050)	\$0.1	(0.015)		\$17.8
2009	\$50.6	\$5.5	\$56.1	\$14.9	(0.294)	\$1.2	(0.211)	\$3.5	(0.070)	\$0.1	(0.023)		\$19.7
2010	\$52.2	\$5.8	\$58.1	\$15.4	(0.295)	\$1.2	(0.212)	\$3.7	(0.071)	\$0.2	(0.027)		\$20.5
2011	\$54.2	\$6.0	\$60.2	\$16.0	(0.295)	\$1.3	(0.212)	\$3.8	(0.071)	\$0.2	(0.027)		\$21.2
2012	\$56.2	\$6.3	\$62.5	\$16.6	(0.295)	\$1.3	(0.212)	\$4.0	(0.071)	\$0.2	(0.027)		\$22.0
2013	\$58.2	\$6.5	\$64.8	\$17.2	(0.295)	\$1.4	(0.212)	\$4.1	(0.071)	\$0.2	(0.027)		\$22.8
2014	\$60.3	\$6.8	\$67.1	\$17.8	(0.295)	\$1.4	(0.212)	\$4.3	(0.071)	\$0.2	(0.027)		\$23.7
2015	\$62.5	\$7.1	\$69.6	\$18.4	(0.295)	\$1.5	(0.212)	\$4.4	(0.071)	\$0.2	(0.027)		\$24.5
2016	\$64.8	\$7.4	\$72.2	\$19.1	(0.294)	\$1.6	(0.212)	\$4.6	(0.071)	\$0.2	(0.027)		\$25.4
2017	\$67.2	\$7.6	\$74.8	\$19.8	(0.294)	\$1.6	(0.212)	\$4.7	(0.071)	\$0.2	(0.027)		\$26.4
2018	\$69.5	\$7.9	\$77.4	\$20.5	(0.294)	\$1.7	(0.212)	\$4.9	(0.071)	\$0.2	(0.027)		\$27.3
2019	\$71.9	\$8.2	\$80.1	\$21.2	(0.294)	\$1.7	(0.212)	\$5.1	(0.071)	\$0.2	(0.027)		\$28.2
2020	\$74.4	\$8.5	\$82.9	\$21.9	(0.294)	\$1.8	(0.212)	\$5.2	(0.071)	\$0.2	(0.027)		\$29.2
2021	\$77.0	\$8.9	\$85.8	\$22.7	(0.294)	\$1.9	(0.212)	\$5.4	(0.071)	\$0.2	(0.027)		\$30.2
2022	\$79.6	\$9.2	\$88.8	\$23.4	(0.294)	\$2.0	(0.212)	\$5.6	(0.071)	\$0.3	(0.027)		\$31.3
2023	\$82.3	\$9.6	\$91.9	\$24.2	(0.294)	\$2.0	(0.212)	\$5.8	(0.071)	\$0.3	(0.027)		\$32.3
2024	\$85.1	\$9.9	\$95.0	\$25.1	(0.294)	\$2.1	(0.212)	\$6.0	(0.071)	\$0.3	(0.027)		\$33.4
2025	\$88.1	\$10.3	\$98.4	\$25.9	(0.294)	\$2.2	(0.212)	\$6.2	(0.071)	\$0.3	(0.027)		\$34.6
2026	\$91.3	\$10.7	\$102.0	\$26.9	(0.294)	\$2.3	(0.212)	\$6.4	(0.071)	\$0.3	(0.027)		\$35.9
2027	\$94.7	\$11.1	\$105.8	\$27.9	(0.294)	\$2.4	(0.212)	\$6.7	(0.071)	\$0.3	(0.027)		\$37.2
2028	\$98.2	\$11.5	\$109.7	\$28.9	(0.294)	\$2.4	(0.212)	\$6.9	(0.071)	\$0.3	(0.027)		\$38.6
2029	\$101.8	\$12.0	\$113.8	\$30.0	(0.294)	\$2.5	(0.212)	\$7.2	(0.071)	\$0.3	(0.027)		\$40.0
2030	\$105.6	\$12.4	\$118.0	\$31.1	(0.294)	\$2.6	(0.212)	\$7.5	(0.071)	\$0.3	(0.027)		\$41.5
2031	\$109.5	\$12.9	\$122.4	\$32.3	(0.294)	\$2.7	(0.212)	\$7.7	(0.071)	\$0.4	(0.027)		\$43.1
2032	\$113.6	\$13.4	\$126.9	\$33.4	(0.294)	\$2.8	(0.212)	\$8.0	(0.071)	\$0.4	(0.027)		\$44.7
2033	\$117.8	\$13.9	\$131.7	\$34.7	(0.294)	\$2.9	(0.212)	\$8.3	(0.071)	\$0.4	(0.027)		\$46.3
2034	\$122.2	\$14.4	\$136.6	\$36.0	(0.294)	\$3.1	(0.212)	\$8.6	(0.071)	\$0.4	(0.027)		\$48.1
2035	\$126.8	\$15.0	\$141.8	\$37.3	(0.294)	\$3.2	(0.212)	\$8.9	(0.071)	\$0.4	(0.027)		\$49.9
2036	\$131.6	\$15.5	\$147.1	\$38.7	(0.294)	\$3.3	(0.212)	\$9.3	(0.071)	\$0.4	(0.027)		\$51.7
2037	\$136.5	\$16.1	\$152.6	\$40.2	(0.294)	\$3.4	(0.212)	\$9.6	(0.071)	\$0.4	(0.027)		\$53.7
2038	\$141.6	\$16.7	\$158.4	\$41.7	(0.294)	\$3.5	(0.212)	\$10.0	(0.071)	\$0.5	(0.027)		\$55.7
2039	\$146.9	\$17.4	\$164.3	\$43.3	(0.294)	\$3.7	(0.212)	\$10.4	(0.071)	\$0.5	(0.027)		\$57.8
2040	\$152.4	\$18.0	\$170.4	\$44.9	(0.294)	\$3.8	(0.212)	\$10.8	(0.071)	\$0.5	(0.027)		\$59.9
2041	\$158.1	\$18.7	\$176.8	\$46.6	(0.294)	\$4.0	(0.212)	\$11.2	(0.071)	\$0.5	(0.027)		\$62.2
2042	\$164.0	\$19.4	\$183.4	\$48.3	(0.294)	\$4.1	(0.212)	\$11.6	(0.071)	\$0.5	(0.027)		\$64.5
2043	\$170.1	\$20.2	\$190.2	\$50.1	(0.294)	\$4.3	(0.212)	\$12.0	(0.071)	\$0.6	(0.027)		\$66.9
2044	\$176.4	\$20.9	\$197.3	\$51.9	(0.294)	\$4.4	(0.212)	\$12.4	(0.071)	\$0.6	(0.027)		\$69.4
2045	\$183.0	\$21.7	\$204.7	\$53.9	(0.294)	\$4.6	(0.212)	\$12.9	(0.071)	\$0.6	(0.027)		\$72.0
2046	\$189.8	\$22.5	\$212.3	\$55.9	(0.294)	\$4.8	(0.212)	\$13.4	(0.071)	\$0.6	(0.027)		\$74.7
2047	\$196.9	\$23.4	\$220.3	\$58.0	(0.294)	\$4.9	(0.212)	\$13.9	(0.071)	\$0.6	(0.027)		\$77.5
2048	\$204.3	\$24.2	\$228.5	\$60.2	(0.294)	\$5.1	(0.212)	\$14.4	(0.071)	\$0.7	(0.027)		\$80.4
2049	\$212.0	\$25.1	\$237.1	\$62.4	(0.294)	\$5.3	(0.212)	\$15.0	(0.071)	\$0.7	(0.027)		\$83.4
2050	\$219.9	\$26.1	\$246.0	\$64.8	(0.294)	\$5.5	(0.212)	\$15.5	(0.071)	\$0.7	(0.027)		\$86.5
2051	\$228.2	\$27.1	\$255.2	\$67.2	(0.294)	\$5.7	(0.212)	\$16.1	(0.071)	\$0.7	(0.027)		\$89.8
2052	\$236.7	\$28.1	\$264.8	\$69.7	(0.294)	\$5.9	(0.212)	\$16.7	(0.071)	\$0.8	(0.027)		\$93.1
2053	\$245.6	\$29.1	\$274.8	\$72.3	(0.294)	\$6.2	(0.212)	\$17.3	(0.071)	\$0.8	(0.027)		\$96.6
2054	\$254.8	\$30.2	\$285.1	\$75.0	(0.294)	\$6.4	(0.212)	\$18.0	(0.071)	\$0.8	(0.027)		\$100.3
2055	\$264.4	\$31.4	\$295.8	\$77.9	(0.294)	\$6.6	(0.212)	\$18.7	(0.071)	\$0.9	(0.027)		\$104.0
2056	\$274.4	\$32.5	\$306.9	\$80.8	(0.294)	\$6.9	(0.212)	\$19.4	(0.071)	\$0.9	(0.027)		\$107.9
2057	\$284.7	\$33.8	\$318.4	\$83.8	(0.294)	\$7.2	(0.212)	\$20.1	(0.071)	\$0.9	(0.027)		\$112.0



TABLE 10 (cont.)

**MILITARY RETIREMENT SYSTEM**  
**PROJECTED PAYROLL AND NORMAL COST PAYMENTS**  
(In Billions of Dollars and as a Proportion of Payroll)

Fiscal Year	Payroll			DoD Normal Cost Payments				Treasury Normal Cost Payments				Normal Cost Payments	
	Full-Time	Part-Time	Total	Full-Time		Part-Time		Full-Time		Part-Time		Total	
2058	\$295.4	\$35.0	\$330.4	\$87.0	(0.294)	\$7.4	(0.212)	\$20.8	(0.071)	\$1.0	(0.027)		\$116.2
2059	\$306.5	\$36.3	\$342.8	\$90.3	(0.294)	\$7.7	(0.212)	\$21.6	(0.071)	\$1.0	(0.027)		\$120.6
2060	\$318.0	\$37.7	\$355.7	\$93.6	(0.294)	\$8.0	(0.212)	\$22.4	(0.071)	\$1.0	(0.027)		\$125.1
2061	\$329.9	\$39.1	\$369.0	\$97.2	(0.294)	\$8.3	(0.212)	\$23.3	(0.071)	\$1.1	(0.027)		\$129.8
2062	\$342.3	\$40.6	\$382.9	\$100.8	(0.294)	\$8.6	(0.212)	\$24.2	(0.071)	\$1.1	(0.027)		\$134.7
2063	\$355.1	\$42.1	\$397.2	\$104.6	(0.294)	\$8.9	(0.212)	\$25.1	(0.071)	\$1.2	(0.027)		\$139.7
2064	\$368.4	\$43.7	\$412.1	\$108.5	(0.294)	\$9.3	(0.212)	\$26.0	(0.071)	\$1.2	(0.027)		\$145.0
2065	\$382.3	\$45.3	\$427.6	\$112.6	(0.294)	\$9.6	(0.212)	\$27.0	(0.071)	\$1.2	(0.027)		\$150.4
2066	\$396.6	\$47.0	\$443.6	\$116.8	(0.294)	\$10.0	(0.212)	\$28.0	(0.071)	\$1.3	(0.027)		\$156.0
2067	\$411.4	\$48.8	\$460.2	\$121.2	(0.294)	\$10.3	(0.212)	\$29.0	(0.071)	\$1.3	(0.027)		\$161.9
2068	\$426.9	\$50.6	\$477.5	\$125.7	(0.294)	\$10.7	(0.212)	\$30.1	(0.071)	\$1.4	(0.027)		\$167.9
2069	\$442.9	\$52.5	\$495.4	\$130.4	(0.294)	\$11.1	(0.212)	\$31.3	(0.071)	\$1.4	(0.027)		\$174.2
2070	\$459.5	\$54.5	\$514.0	\$135.3	(0.294)	\$11.5	(0.212)	\$32.4	(0.071)	\$1.5	(0.027)		\$180.8
2071	\$476.7	\$56.5	\$533.2	\$140.4	(0.294)	\$12.0	(0.212)	\$33.6	(0.071)	\$1.5	(0.027)		\$187.5
2072	\$494.6	\$58.6	\$553.2	\$145.6	(0.294)	\$12.4	(0.212)	\$34.9	(0.071)	\$1.6	(0.027)		\$194.6
2073	\$513.1	\$60.8	\$573.9	\$151.1	(0.294)	\$12.9	(0.212)	\$36.2	(0.071)	\$1.7	(0.027)		\$201.9
2074	\$532.3	\$63.1	\$595.5	\$156.8	(0.294)	\$13.4	(0.212)	\$37.6	(0.071)	\$1.7	(0.027)		\$209.4
2075	\$552.3	\$65.5	\$617.8	\$162.6	(0.294)	\$13.9	(0.212)	\$39.0	(0.071)	\$1.8	(0.027)		\$217.3
2076	\$573.0	\$68.0	\$641.0	\$168.7	(0.294)	\$14.4	(0.212)	\$40.4	(0.071)	\$1.9	(0.027)		\$225.4
2077	\$594.5	\$70.5	\$665.0	\$175.1	(0.294)	\$14.9	(0.212)	\$42.0	(0.071)	\$1.9	(0.027)		\$233.9
2078	\$616.8	\$73.1	\$689.9	\$181.6	(0.294)	\$15.5	(0.212)	\$43.5	(0.071)	\$2.0	(0.027)		\$242.7
2079	\$639.9	\$75.9	\$715.8	\$188.5	(0.294)	\$16.1	(0.212)	\$45.2	(0.071)	\$2.1	(0.027)		\$251.8
2080	\$663.9	\$78.7	\$742.7	\$195.5	(0.294)	\$16.7	(0.212)	\$46.9	(0.071)	\$2.2	(0.027)		\$261.2
2081	\$688.9	\$81.7	\$770.5	\$202.9	(0.294)	\$17.3	(0.212)	\$48.6	(0.071)	\$2.2	(0.027)		\$271.0
2082	\$714.7	\$84.8	\$799.5	\$210.5	(0.294)	\$18.0	(0.212)	\$50.4	(0.071)	\$2.3	(0.027)		\$281.2
2083	\$741.5	\$87.9	\$829.4	\$218.4	(0.294)	\$18.6	(0.212)	\$52.3	(0.071)	\$2.4	(0.027)		\$291.7
2084	\$769.3	\$91.2	\$860.6	\$226.6	(0.294)	\$19.3	(0.212)	\$54.3	(0.071)	\$2.5	(0.027)		\$302.7
2085	\$798.2	\$94.6	\$892.8	\$235.1	(0.294)	\$20.1	(0.212)	\$56.3	(0.071)	\$2.6	(0.027)		\$314.0
2086	\$828.1	\$98.2	\$926.3	\$243.9	(0.294)	\$20.8	(0.212)	\$58.4	(0.071)	\$2.7	(0.027)		\$325.8
2087	\$859.2	\$101.9	\$961.1	\$253.0	(0.294)	\$21.6	(0.212)	\$60.6	(0.071)	\$2.8	(0.027)		\$338.0
2088	\$891.4	\$105.7	\$997.1	\$262.5	(0.294)	\$22.4	(0.212)	\$62.9	(0.071)	\$2.9	(0.027)		\$350.7
2089	\$924.8	\$109.7	\$1,034.5	\$272.4	(0.294)	\$23.2	(0.212)	\$65.3	(0.071)	\$3.0	(0.027)		\$363.9
2090	\$959.5	\$113.8	\$1,073.3	\$282.6	(0.294)	\$24.1	(0.212)	\$67.7	(0.071)	\$3.1	(0.027)		\$377.5
2091	\$995.5	\$118.0	\$1,113.6	\$293.2	(0.294)	\$25.0	(0.212)	\$70.3	(0.071)	\$3.2	(0.027)		\$391.7
2092	\$1,032.8	\$122.5	\$1,155.3	\$304.2	(0.294)	\$25.9	(0.212)	\$72.9	(0.071)	\$3.3	(0.027)		\$406.3
2093	\$1,071.6	\$127.1	\$1,198.6	\$315.6	(0.294)	\$26.9	(0.212)	\$75.6	(0.071)	\$3.5	(0.027)		\$421.6
2094	\$1,111.8	\$131.8	\$1,243.6	\$327.4	(0.294)	\$27.9	(0.212)	\$78.5	(0.071)	\$3.6	(0.027)		\$437.4
2095	\$1,153.4	\$136.8	\$1,290.2	\$339.7	(0.294)	\$29.0	(0.212)	\$81.4	(0.071)	\$3.7	(0.027)		\$453.8
2096	\$1,196.7	\$141.9	\$1,338.6	\$352.4	(0.294)	\$30.1	(0.212)	\$84.5	(0.071)	\$3.9	(0.027)		\$470.8
2097	\$1,241.6	\$147.2	\$1,388.8	\$365.6	(0.294)	\$31.2	(0.212)	\$87.6	(0.071)	\$4.0	(0.027)		\$488.5
2098	\$1,288.1	\$152.7	\$1,440.9	\$379.3	(0.294)	\$32.4	(0.212)	\$90.9	(0.071)	\$4.2	(0.027)		\$506.8
2099	\$1,336.4	\$158.5	\$1,494.9	\$393.6	(0.294)	\$33.6	(0.212)	\$94.3	(0.071)	\$4.3	(0.027)		\$525.8
2100	\$1,386.6	\$164.4	\$1,551.0	\$408.3	(0.294)	\$34.8	(0.212)	\$97.8	(0.071)	\$4.5	(0.027)		\$545.5
2101	\$1,438.6	\$170.6	\$1,609.1	\$423.6	(0.294)	\$36.1	(0.212)	\$101.5	(0.071)	\$4.7	(0.027)		\$566.0
2102	\$1,492.5	\$177.0	\$1,669.5	\$439.5	(0.294)	\$37.5	(0.212)	\$105.3	(0.071)	\$4.8	(0.027)		\$587.2
2103	\$1,548.5	\$183.6	\$1,732.1	\$456.0	(0.294)	\$38.9	(0.212)	\$109.3	(0.071)	\$5.0	(0.027)		\$609.2
2104	\$1,606.6	\$190.5	\$1,797.0	\$473.1	(0.294)	\$40.4	(0.212)	\$113.4	(0.071)	\$5.2	(0.027)		\$632.0
2105	\$1,666.8	\$197.6	\$1,864.4	\$490.9	(0.294)	\$41.9	(0.212)	\$117.6	(0.071)	\$5.4	(0.027)		\$655.8
2106	\$1,729.3	\$205.1	\$1,934.4	\$509.3	(0.294)	\$43.4	(0.212)	\$122.0	(0.071)	\$5.6	(0.027)		\$680.3

**TABLE 11**  
**PAST AND PROJECTED UNFUNDED LIABILITY PAYMENTS ON OCTOBER 1**  
(\$ in billions)

<b>Calendar Year</b>	<b>Original UFL</b>	<b>Assumption Changes</b>	<b>Benefit Changes</b>	<b>Actuarial Experience</b>	<b>Total</b>
1984*	\$9.500	\$ .000	\$ .000	\$ .000	\$9.500
1985*	\$10.500	\$ .000	\$ .000	\$ .000	\$10.500
1986*	\$11.042	\$ .000	\$ .000	(\$ .518)	\$10.524
1987*	\$11.679	\$ .000	(\$ .113)	(\$1.281)	\$10.285
1988*	\$12.003	\$ .135	(\$ .112)	(\$2.244)	\$9.782
1989*	\$16.300	(\$2.116)	(\$ .132)	(\$3.456)	\$10.596
1990*	\$17.237	(\$2.237)	(\$ .140)	(\$4.078)	\$10.782
1991*	\$18.228	(\$2.366)	(\$ .148)	(\$4.508)	\$11.206
1992*	\$22.621	(\$4.625)	(\$ .171)	(\$5.552)	\$12.273
1993*	\$23.865	(\$4.880)	(\$ .180)	(\$6.897)	\$11.908
1994*	\$25.177	(\$5.148)	(\$ .189)	(\$8.370)	\$11.470
1995*	\$27.746	(\$6.619)	(\$ .079)	(\$10.349)	\$10.699
1996*	\$33.456	(\$6.917)	(\$ .042)	(\$11.346)	\$15.151
1997*	\$36.227	(\$8.529)	\$ .048	(\$12.627)	\$15.119
1998*	\$37.676	(\$8.870)	\$ .050	(\$13.606)	\$15.250
1999*	\$39.183	(\$9.201)	\$ .052	(\$14.732)	\$15.302
2000*	\$42.098	(\$9.984)	\$ .335	(\$16.360)	\$16.089
2001*	\$43.571	(\$9.862)	\$ .472	(\$17.134)	\$17.047
2002*	\$45.096	(\$10.059)	\$ .661	(\$17.770)	\$17.928
2003*	\$46.674	(\$10.741)	\$ .977	(\$18.721)	\$18.189
2004*	\$46.857	(\$10.959)	\$4.627	(\$19.167)	\$21.358
2005*	\$48.614	(\$11.337)	\$6.081	(\$20.178)	\$23.180
2006*	\$50.437	(\$11.238)	\$6.313	(\$19.464)	\$26.048
2007*	\$66.711	(\$7.642)	\$6.430	(\$19.312)	\$46.187
2008	\$69.213	(\$5.076)	\$7.026	(\$20.038)	\$51.125
2009	\$71.808	(\$5.266)	\$7.290	(\$20.790)	\$53.042
2010	\$74.501	(\$5.464)	\$7.563	(\$21.569)	\$55.031
2011	\$77.295	(\$5.668)	\$7.847	(\$22.378)	\$57.096
2012	\$80.194	(\$5.881)	\$8.141	(\$23.217)	\$59.237
2013	\$83.201	(\$6.102)	\$8.446	(\$24.088)	\$61.457
2014	\$86.321	(\$6.330)	\$8.763	(\$24.991)	\$63.763
2015	\$89.558	(\$6.568)	\$9.091	(\$25.929)	\$66.152
2016	\$92.916	(\$6.814)	\$9.432	(\$26.901)	\$68.633
2017	\$96.401	(\$7.070)	\$9.786	(\$27.910)	\$71.207
2018	\$100.016	(\$7.335)	\$10.153	(\$28.956)	\$73.878
2019	\$103.767	(\$7.610)	\$10.534	(\$30.042)	\$76.649
2020	\$107.658	(\$7.895)	\$10.929	(\$31.169)	\$79.523
2021	\$111.695	(\$8.191)	\$11.339	(\$32.338)	\$82.505
2022	\$115.883	(\$8.498)	\$11.764	(\$33.550)	\$85.599
2023	\$120.229	(\$8.817)	\$12.205	(\$34.808)	\$88.809
2024	\$124.738	(\$9.148)	\$12.663	(\$2.655)	\$125.598
2025	\$129.415	(\$9.491)	\$13.137	\$ .000	\$133.061
2026	\$ .000	(\$9.847)	\$13.630	\$ .000	\$3.783
2027	\$ .000	(\$10.216)	\$14.141	\$ .000	\$3.925
2028	\$ .000	(\$9.754)	\$14.672	\$ .000	\$4.918
2029	\$ .000	\$ .000	\$15.222	\$ .000	\$15.222
2030	\$ .000	\$ .000	\$15.792	\$ .000	\$15.792
2031	\$ .000	\$ .000	\$16.385	\$ .000	\$16.385
2032	\$ .000	\$ .000	\$16.999	\$ .000	\$16.999
2033	\$ .000	\$ .000	\$17.636	\$ .000	\$17.636
2034	\$ .000	\$ .000	\$ .955	\$ .000	\$ .955

\*Actual data

**TABLE 12**  
**PAST AND PROJECTED UNFUNDED LIABILITY BALANCE ON SEPTEMBER 30 (Before Payment)**  
(\$ in billions)

<b>Calendar Year</b>	<b>Original UFL</b>	<b>Assumption Changes **</b>	<b>Benefit Changes</b>	<b>Actuarial Experience</b>	<b>Total ***</b>
1984*	\$528.700	\$ .000	\$ .000	\$ .000	\$528.700
1985*	\$553.500	\$ .000	\$ .000	(\$13.800)	\$539.700
1986*	\$578.800	\$ .000	(\$3.000)	(\$34.200)	\$541.600
1987*	\$605.200	\$3.600	(\$2.998)	(\$59.500)	\$546.302
1988*	\$632.700	(\$50.062)	(\$3.076)	(\$81.180)	\$498.382
1989*	\$664.173	(\$53.711)	(\$3.172)	(\$94.562)	\$512.728
1990*	\$693.224	(\$55.207)	(\$3.253)	(\$102.283)	\$532.481
1991*	\$723.306	(\$97.578)	(\$3.331)	(\$111.879)	\$510.518
1992*	\$757.959	(\$102.353)	(\$3.421)	(\$139.327)	\$512.858
1993*	\$790.488	(\$105.057)	(\$3.494)	(\$167.942)	\$513.995
1994*	\$824.120	(\$130.691)	(\$ .968)	(\$201.052)	\$491.409
1995*	\$852.872	(\$134.017)	(\$ .832)	(\$217.255)	\$500.768
1996*	\$880.822	(\$159.859)	\$ .897	(\$231.424)	\$490.436
1997*	\$902.444	(\$162.883)	\$1.000	(\$244.673)	\$495.888
1998*	\$922.521	(\$164.057)	\$1.014	(\$259.976)	\$499.503
1999*	\$942.360	(\$169.827)	\$6.583	(\$277.940)	\$501.176
2000*	\$959.626	(\$164.942)	\$9.414	(\$284.168)	\$519.931
2001*	\$974.873	(\$162.970)	\$13.075	(\$285.393)	\$539.585
2002*	\$989.509	(\$170.593)	\$19.216	(\$293.105)	\$545.027
2003*	\$1003.439	(\$172.248)	\$94.231	(\$297.115)	\$628.308
2004*	\$1016.562	(\$171.288)	\$125.272	(\$304.415)	\$666.132
2005*	\$1030.312	(\$165.769)	\$128.261	(\$290.020)	\$702.784
2006*	\$1043.054	(\$126.439)	\$131.332	(\$282.660)	\$765.287
2007*	\$1052.174	(\$89.221)	\$140.140	(\$279.068)	\$824.025
2008	\$1044.591	(\$86.474)	\$141.732	(\$275.341)	\$824.509
2009	\$1033.901	(\$86.282)	\$142.789	(\$270.621)	\$819.787
2010	\$1019.818	(\$85.877)	\$143.629	(\$264.821)	\$812.749
2011	\$1002.036	(\$85.237)	\$144.230	(\$257.847)	\$803.182
2012	\$980.226	(\$84.344)	\$144.566	(\$249.597)	\$790.851
2013	\$954.034	(\$83.170)	\$144.610	(\$239.963)	\$775.510
2014	\$923.083	(\$81.692)	\$144.334	(\$228.828)	\$756.897
2015	\$886.967	(\$79.884)	\$143.705	(\$216.067)	\$734.722
2016	\$845.254	(\$77.715)	\$142.691	(\$201.546)	\$708.684
2017	\$797.478	(\$75.155)	\$141.255	(\$185.124)	\$678.454
2018	\$743.142	(\$72.170)	\$139.357	(\$166.647)	\$643.682
2019	\$681.713	(\$68.725)	\$136.956	(\$145.952)	\$603.992
2020	\$612.623	(\$64.782)	\$134.007	(\$122.865)	\$558.984
2021	\$535.263	(\$60.300)	\$130.463	(\$97.197)	\$508.228
2022	\$448.982	(\$55.236)	\$126.272	(\$68.751)	\$451.267
2023	\$353.085	(\$49.542)	\$121.378	(\$37.313)	\$387.608
2024	\$246.827	(\$43.169)	\$115.723	(\$2.655)	\$316.727
2025	\$129.415	(\$36.062)	\$109.244	\$ .000	\$202.597
2026	\$ .000	(\$28.165)	\$101.873	\$ .000	\$73.708
2027	\$ .000	(\$19.417)	\$93.538	\$ .000	\$74.120
2028	\$ .000	(\$9.754)	\$84.161	\$ .000	\$74.407
2029	\$ .000	\$ .000	\$73.658	\$ .000	\$73.658
2030	\$ .000	\$ .000	\$61.942	\$ .000	\$61.942
2031	\$ .000	\$ .000	\$48.919	\$ .000	\$48.919
2032	\$ .000	\$ .000	\$34.486	\$ .000	\$34.486
2033	\$ .000	\$ .000	\$18.537	\$ .000	\$18.537
2034	\$ .000	\$ .000	\$ .955	\$ .000	\$ .955

\*Actual data

\*\*The Total value given for 2005 shows \$702.784. The prior valuation report incorrectly displayed \$702.753. This is due to the 2005 Benefit Changes incorrectly showing \$128.229 in the prior valuation report.

## **The Military Retirement Fund Transaction Process**

The description of deficit, debt, and funding impact contained in this section are applicable under the current practices of the federal government regarding budget accounting and tax policy. These practices do not provide for increases in taxes to fund the military retirement system beyond what is required to pay benefits to retirees and survivors each year, but do result in increases in the national debt. If current practices change, then this description would need to be revised.

A trust fund was created inside the Unified Budget of the federal government for the monies of the military retirement system. This fund has three sources of income: (1) normal cost payments made by DoD, (2) unfunded liability and Concurrent Receipt normal cost payments made by Treasury, and (3) interest earnings on investments in government securities made by Treasury and the payment of the par values of these securities at maturity. All three of these items are intragovernmental transfers consisting of debits from one government account and credits to another.

The fund has two types of payouts: (1) payments to retirees and survivors of retirees and (2) purchases of U.S. Treasury securities. The purchase of a Treasury security is also an intragovernmental transfer, while a payment to a retiree or a survivor is not.

Figure 1 on the following page depicts this process. The only transactions in a particular year that directly affect the deficit of the Unified Budget are those that pass in or out of the government, such as tax collections (“in”) and retiree or survivor payments (“out”). The intragovernmental transfers are debits and credits within the federal budget, with no direct effect on the deficit. The following examples illustrate the process:

- If DoD debits \$18 billion in normal cost payments and the fund credits the \$18 billion, the net direct federal budget deficit effect is zero.
- If the fund purchases \$20 billion in securities (debit) and the Treasury sells \$20 billion in securities (credit), the net direct federal budget deficit effect is zero.
- If the Treasury pays \$15 billion interest (debit) and the fund earns \$15 billion interest (credit), the net direct federal budget deficit effect is zero.
- Disregarding all other government programs, if the government collects \$40 billion in tax revenues (credit) and pays \$47 billion to retirees (debit), the net direct federal budget deficit effect is \$7 billion.

## UNIFIED BUDGET

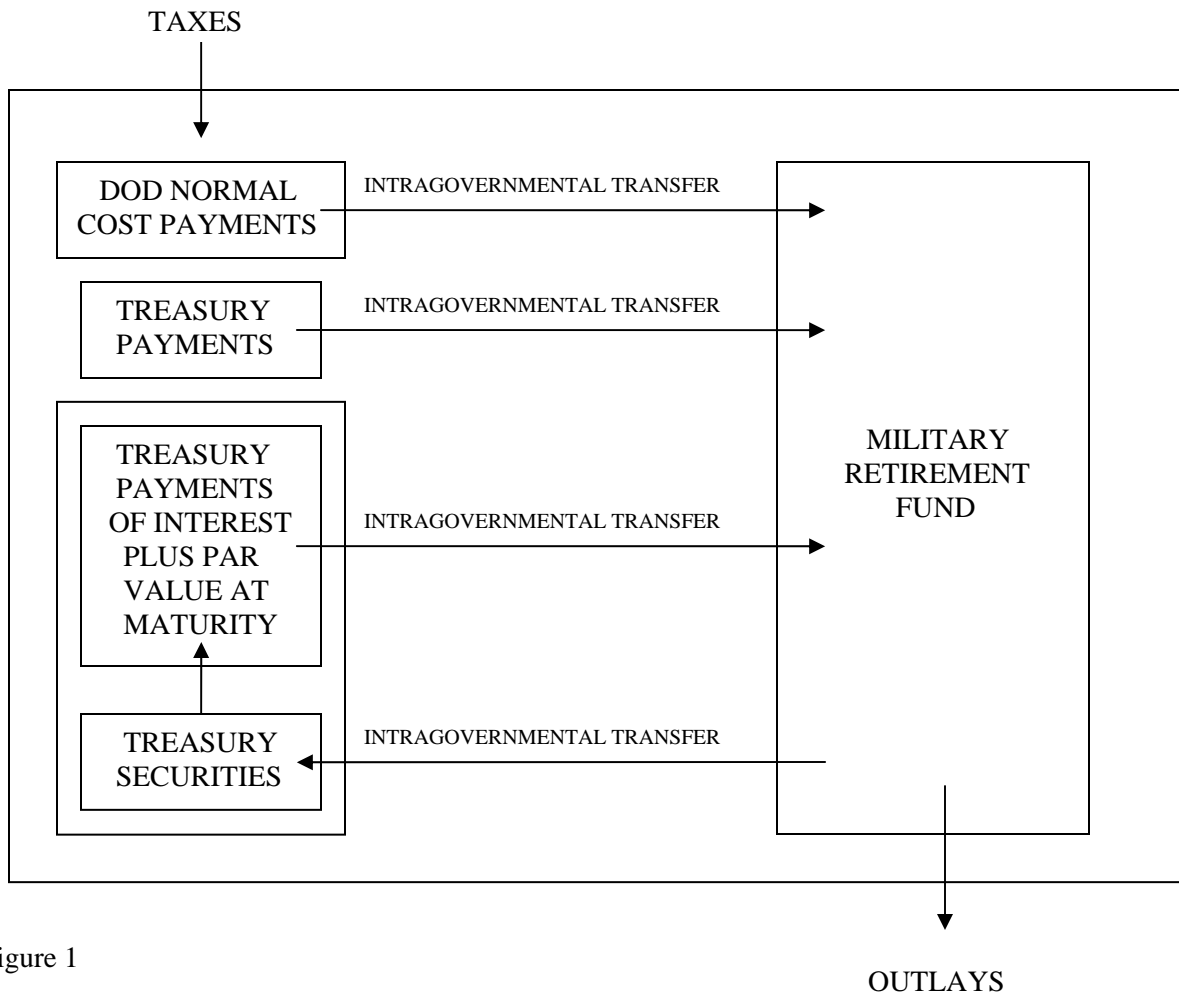


Figure 1

All of the intragovernmental transfers in Figure 1 will always generate both a credit and an associated equal debit within the Unified Budget. Consequently, under current federal budget accounting practices, contributions to the fund beyond what are required to pay benefits to retirees and survivors that year have no impact on the total federal deficit. Just as in the pay-as-you-go method, the only transactions that directly affect the deficit in the retirement system accounting process are payments to retirees and survivors (i.e. outlays).

On the other hand, the purchase of securities by the fund does increase the national debt, specifically the portion of the debt held by the government. The portion held by the public will not change. However, the total debt will increase and this requires an increase in the statutory borrowing authority (debt ceiling).

Suppose that in the year 2007 the amount needed to pay retirees was \$44 billion and the military retirement fund had grown to \$218 billion. The following transactions would take place:

- Fund cashes in \$44 billion in securities (credit).
- Treasury pays \$44 billion to Fund (debit).
- Net federal surplus zero.

Since no budget surplus can be derived from using fund money, the government still has a need for \$44 billion to pay retirees—the same need it would have under the pay-as-you-go system. Accordingly, the fund cannot transfer liabilities from one tax year to another.

However, funding does have an effect on the DoD budget. With the normal cost payments (except for Concurrent Receipt) in the DoD budget, policymakers now consider the impact on future retirement costs when they make manpower decisions, and this could have a significant impact on future federal budgets. For example, if a decision were made today to double the size of the active duty and reserve forces, the DoD budget would automatically have an immediate increase in retirement obligations. Under the pay-as-you-go method, the retirement expenses would not necessarily be considered in the initial decision since they would not show up for 20 years.

The fact that costs are fully recognized in advance probably provides greater benefit security over the long term. Also, when there is a fund, the system is not as dependent on obtaining the necessary appropriation from Congress each year in order to pay benefits for that year. This can provide additional benefit security in the short run.

## APPENDIX A

### SUMMARY OF THE MILITARY RETIREMENT SYSTEM

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## SUMMARY OF THE MILITARY RETIREMENT SYSTEM

As of September 30, 2007

### Summary

The military retirement system applies to members of the Army, Navy, Marine Corps, and Air Force. However, most of the provisions also apply to retirement systems for members of the Coast Guard (administered by the Department of Homeland Security), officers of the Public Health Service (administered by the Department of Health and Human Services), and officers of the National Oceanic and Atmospheric Administration (administered by the Department of Commerce). Only those members in plans administered by the Department of Defense (DoD) are included in this report.

The system is a funded, noncontributory defined benefit plan that includes nondisability retired pay, disability retired pay, retired pay for reserve service, survivor annuity programs, and special compensation programs for certain disabled retirees. The Service Secretaries may approve immediate nondisability retired pay at any age with credit of at least 20 years of active duty service. Reserve retirees generally must be at least 60 years old and have at least 20 qualified years of service before retired pay commences (Public Law 110-181 allows retirement prior to age 60 if certain types of active service are performed). There is no vesting before retirement.

There are three distinct non-disability benefit formulas related to three populations within the military retirement system. (1) *Final Pay*: Military personnel who first became members of a uniformed service before September 8, 1980, have retired pay equal to final basic pay times a multiplier. The multiplier is equal to 2.5 percent times years of service. (2) *High-3 (HI-3)*: If the retiree first became a member of a uniformed service on or after September 8, 1980, the average of the highest 36 months of basic pay is used instead of final basic pay. (3) *Career Status Bonus (CSB)/Redux*: Members who first became a member of a uniformed service on or after August 1, 1986, may choose between a High-3 and CSB/Redux retirement. Those who elect CSB/Redux receive the Career Status Bonus outlined below, also have retired pay computed on a base of the average of their highest 36 months of basic pay, but are subject to a multiplier penalty if they retire with less than 30 years of service; however, at age 62, their retired pay is recomputed without the penalty. Members make their election during the fifteenth year of service and may receive the Career Status Bonus of \$30,000 in either a lump-sum or installments. Those who elect CSB/Redux generally must remain continuously on active duty until they complete 20 years of active duty service or forfeit a portion of the \$30,000.

Retired pay and survivor annuity benefits are automatically adjusted annually to protect the purchasing power of initial retired pay. The benefits associated with members first entering the armed services before August 1, 1986, or those entering on or after that date who do not take the CSB, have their benefits adjusted annually by the percentage increase in the average Consumer Price Index (CPI). Refer to the section "Cost-of-Living Increases" in this appendix for more information on the CPI. This is commonly referred to as full CPI protection. Benefits



associated with members entering on or after August 1, 1986, who elect the \$30,000 CSB bonus payment are annually increased by the percentage change in the CPI minus 1 percent (except when the change in the CPI is less than or equal to 1%), but at the military member's age 62, or when the member would have been age 62 for a survivor annuity, the benefits are restored to the amount that would have been payable had full CPI protection been in effect. This restoral is in combination with that described in the previous paragraph. However, after this restoral, partial indexing (CPI minus 1 percent) continues for future retired pay and survivor annuity payments.

### **Nondisability Retirement From Active Service**

The current system allows voluntary retirement upon completion of at least 20 years of service at any age, subject to Service Secretary approval. The military retiree receives immediate retired pay calculated as (base pay) times (a multiplier). Base pay is equal to terminal basic pay if the retiree first became a member of a uniformed service before September 8, 1980. It is equal to the average of the highest 36 months of basic pay for all other members. The multiplier is equal to (2.5 percent) times (years of service, rounded down to the nearest month). Members first entering a uniformed service on or after August 1, 1986, who elect CSB/Redux and who retire with less than 30 years of service receive a temporary penalty until age 62. The penalty reduces the multiplier by one percentage point for each full year of service under 30. For example, the multiplier for a 20-year retiree would be 40 percent (50 percent minus 10 percent). At age 62, the retired pay is recomputed with the penalty removed.

As of September 30, 2007, there were 1.46 million nondisability retirees from active duty receiving retired pay. In FY 2007, nondisability retirees from active duty were paid \$35.5 billion. Included in this number are a reported 3,312 nondisabled retirees who elected CSB/Redux.

### **Disability Retirement**

A disabled military member is entitled to disability retired pay if the member has at least 20 years of service or the disability, as rated by the DoD, is at least 30 percent (under a standard schedule of rating disabilities by the Veterans Administration) and either (1) the member has at least eight years of service; (2) the disability results from active duty; or (3) the disability occurred in the line of duty during a time of war or national emergency or certain other time periods.

In disability retirement, the member may elect to receive retired pay equal to either (1) the accrued nondisability retirement benefit regardless of eligibility to retire or (2) base pay multiplied by the rated percent of disability (where the disability rating cannot exceed 75 percent). Only the excess of (1) over (2) is subject to federal income taxes if the member had service on or before September 24, 1975. If not a member of a uniformed service on September 24, 1975, disability retired pay is tax-exempt only for those disabilities that are combat or hazardous duty related. Base pay is equal to final basic pay if the retiree first became a member

of a uniformed service before September 8, 1980; otherwise, base pay is equal to the average of the highest 36 months of basic pay.

Members whose disabilities may not be permanent are placed on a temporary-disability retired list and receive disability retirement pay just as if they were permanently disabled. However, they must be physically examined every 18 months for any change in disability. A final determination must be made within five years. The temporary disability pay is calculated like the permanent disability retired pay, except that it can be no less than 50 percent of base pay.

Members who elected the CSB/Redux retirement option, but who retired for disability, are not subject to the reduced CSB/Redux retired pay multiplier and are awarded retired pay based on the disability retired rules outlined above. However, such members continue to be subject to the reduced CPI as Career Status Bonus recipients.

As of September 30, 2007, there were 85,000 disability retirees receiving retired pay. In FY 2007, disability retirees were paid \$1.29 billion. Included in this number are a reported 121 disability retirees who elected CSB/Redux.

### **Reserve Retirement**

Members of the reserves may retire after 20 qualifying years of creditable service. However, reserve retired pay is not payable until age 60 unless the member performs certain types of active duty or active service subsequent to the enactment of the National Defense Authorization Act for FY 2008 (P.L. 110-181). Retirement age is reduced below 60 by three months for every 90 days of active service with a limit of 10 years. (Eligibility for retiree health benefits remains at age 60 even if the eligibility age for retired pay is reduced.) Retired pay is computed as base pay times 2.5 percent times years of service. If the reservist was first a member of a uniformed service before September 8, 1980, base pay is defined as the active duty basic pay in effect for the retiree's grade and years of service at the time that retired pay begins. If the reservist first became a member of the armed services on or after September 8, 1980, base pay is the average basic pay for the member's grade in the highest 36 months computed as if he/she was on active duty for the entire period preceding age 60. The years of service are determined by using a point system, where 360 points convert to a year of service. Typically, one point is awarded for one day of active duty service (e.g. active duty training) or one inactive duty training (IDT) drill attendance. Reservists may perform two IDT periods in one day thereby receiving two retirement points per day. In addition, 15 points are awarded for completion of one year's membership in a reserve component. A creditable year of service is one in which the member earned at least 50 points. A member generally cannot retire with less than 20 creditable years, although points earned in non-creditable years are used in the retirement calculation. Beginning with years of service that include October 30, 2007, non-active duty points are limited in any year to no more than 130. Lesser limitations have applied in the past.

As of September 30, 2007, there were 313,000 reserve retirees receiving retired pay. In FY 2007, reserve retirees were paid \$3.86 billion.

## **Survivor Benefits**

Legislation originating in 1953 provided optional survivor benefits. It was later referred to as the Retired Servicemen's Family Protection Plan (RSFPP). The plan proved to be expensive to the participants and inadequate since the survivor annuities were never adjusted for inflation and could not be more than 50 percent of retired pay. RSFPP was designed to be self-supporting in the sense that the present value of the reductions to retired pay equaled the present value of the survivor annuities.

On September 21, 1972, RSFPP was replaced by the Survivor Benefit Plan (SBP) for new retirees. RSFPP still covers those servicemen retired before 1972 who did not convert to the new plan or who retained RSFPP in conjunction with SBP. RSFPP continues to pay survivor annuities.

Retired pay is reduced, before taxes, for the member's cost of SBP. Total SBP costs are shared by the government and the retiree, so the reductions in retired pay are only a portion of the total cost of the SBP program.

The SBP survivor annuity is 55 percent of the member's base amount. The base amount is elected by the member, but cannot be less than \$300 or more than the member's full retired pay. If the member elects CSB/Redux and is subject to a penalty for service under 30 years in the calculation of retired pay, the maximum base amount is equal to the full retired pay without the penalty. However, the annuity for a survivor of a CSB/Redux retiree is subject to the reduced CPI.

When the plan started in 1972, benefits for those 62 and older were reduced by the constructed amount of Social Security for which the survivor would be eligible based on the member's military pay. In 1985, that reduction formula was changed so all annuitants 62 and over received a reduced flat rate of 35 percent of the member's base. Beginning October 1, 2005, the age 62 reduced rate will be phased out in 5 percent increments. On April 1, 2008, the survivor benefit reduction at age 62 will be fully eliminated and the rate of 55 percent of the member's elected base becomes standard for all survivors, regardless of age.

During FY 1987, the SBP program's treatment of survivor remarriages changed. Prior to the change, a surviving spouse remarrying before age 60 had the survivor annuity suspended. The change lowered the age to 55. If the remarriage ends in divorce or death, the annuity is reinstated.

Members who die on active duty are assumed to have retired with full disability on the day they died and to have elected full SBP coverage for spouses, former spouses, and/or children. Insurable interest elections may be applicable in some cases. These benefits have been improved and expanded over the history of the program.

The surviving spouse (or dependent children if there is no surviving spouse or the spouse subsequently dies) of a reservist with fewer than 20 qualifying years of service who dies while

performing inactive duty is entitled to a survivor annuity under the Reserve Component Survivor Benefit Program (RCSBP).

SBP annuities are reduced by any VA survivor benefits (Dependency and Indemnity Compensation (DIC)) and all premiums relating to the reductions are returned to the survivor. The 2008 National Defense Authorization Act (P.L. 110-181) included a temporary Special Survivor Indemnity Allowance that pays a monthly amount (\$50 in FY 2009, increasing to \$100 by FY 2014, in \$10 increments) to surviving spouses with a DIC offset; the authority for the allowance ends in 2016. As with retired pay, SBP annuities and premiums are annually increased with cost-of-living adjustments (COLAs). These COLAs are either full or partial CPI increases, depending on the benefit formula covering the member. If a member who elected the Career Status Bonus dies before age 62, the survivor is subject to partial COLAs and his/her annuity is increased on what would have been the member's 62nd birthday to the amount that would have been payable had full COLAs been in effect. Partial COLAs continue annually thereafter.

For reserve retirees, the same set of retired pay reductions applies for survivor coverage after a reservist turns 60 and begins to receive retired pay. RCSBP provides annuities to survivors of reservists who die before age 60 (or earlier if they have certain active service), provided they attained 20 years of qualified service. The added cost of this coverage is borne completely by reservists through deductions from future retired pay and/or survivor annuities.

A paid-up provision eliminating the reduction in retired pay for premiums for SBP and RSFPP coverage is effective October 1, 2008, for participants age 70 or older whose retired pay has been reduced for 30 years or more.

As of September 30, 2007, there were 287,000 survivors of military members receiving annuity payments. In FY 2007, survivors were paid \$2.92 billion.

### **Temporary Early Retirement Authority (TERA)**

Public Law 102-484 granted temporary authority for the military services to offer early retirements to members with more than 15 but less than 20 years of service. The retired pay was calculated in the usual way except that there was a reduction of 1 percent for every year below 20 years of service. Part or all of this reduction can be restored at age 62 if the retired member works in a qualified public service job during the period from the date of retirement to the date on which the retiree would have completed 20 years of service. Unlike members who leave military service before 20 years with voluntary separation incentives or special separation benefits, these early retirees are generally treated like regular military retirees for the purposes of other retirement benefits. This authority expired on September 1, 2002.

In FY 2007, 58,000 TERA retirees were paid \$834 million.

## **Cost-of-Living Increases**

All nondisability retirement, disability retirement, and most survivor annuities are adjusted annually for inflation. Cost-of-living adjustments (COLAs) are automatically scheduled to occur every 12 months, on December 1st, to be reflected in checks issued at the beginning of January.

The “full” COLA effective December 1 is computed by calculating the percentage increase in the average CPI of the third quarter of the prior calendar year to the third quarter of the current calendar year. The increase is based on the Urban Wage Earner and Clerical Worker Consumer Price Index (CPI-W) and is rounded to the nearest tenth of one percent.

The benefits of retirees (and most survivors) are increased annually with the full COLA, except for those first entering a uniformed service on or after August 1, 1986, who elect CSB/Redux. Their benefits are increased annually with a partial COLA equal to the full COLA minus 1 percent (except if the full COLA is less than or equal to 1%). A one-time restoral is given to a partial COLA recipient on the first day of the month after the retiree’s 62nd birthday. At this time, retired pay (or the survivor benefit if the retiree is deceased) is increased to the amount that would have been payable had full COLAs been in effect. Annual partial COLAs continue after this restoral.

## **Relationship with Veterans Administration Benefits**

The Department of Veterans Affairs (VA) provides compensation for Service-connected and certain non-Service-connected disabilities. These VA benefits can be in place of or in combination with DoD retired pay, but through December 31, 2003, were not fully additive. Since VA benefits are exempt from federal income taxes, it is often to the advantage of a member to elect them. Through 2003, retired pay earned from DoD for military service was offset by any payment received from VA for a VA-rated disability. Beginning with the National Defense Authorization Act for FY 2004 (P.L. 108-136), a series of legislation has been enacted that increasingly reduces or eliminates the offset to military retired pay due to receipt of VA disability compensation. Members with a combined VA disability rating of 50% or greater who have at least 20 years of service will have their offset eliminated under the Concurrent Retirement and Disability Pay (CRDP) program. The CRDP program has a ten-year phase-in schedule that began in 2004; however, the offset is already fully eliminated for members whose disabilities are rated total or make the individual unemployable. Members whose disability meets certain combat-related criteria can elect to receive payments against the offset under the Combat Related Special Compensation (CRSC) program. Under CRSC, members are not subject to a phase-in schedule, are not required to have at least 20 years of service (per P.L. 110-181), and are not required to have at least a 50% VA disability rating. Although CRSC amounts are calculated based on retired pay lost due to offset and are paid from the Military Retirement Fund, CRSC is not technically considered retired pay. CRSC payments are tax exempt. A member may not participate in both the CRDP and CRSC programs simultaneously, but may change from one to the other during an annual "open season."

VA benefits also overlap survivor benefits through the Dependency and Indemnity Compensation (DIC) program. DIC is payable to survivors of veterans who die from Service-connected causes. Although an SBP annuity must be reduced by the amount of any DIC benefit, all SBP premiums relating to the reduction in benefits are returned to the survivor. The 2008 National Defense Authorization Act (P.L. 110-181) included a temporary Special Survivor Indemnity Allowance that pays a monthly amount (\$50 in FY 2009, increasing to \$100 by FY 2014, in \$10 increments) to survivors with a DIC offset; the authority for the allowance ends in 2016.

### **Interrelationship with Other Federal Service**

For retirement purposes, no credit is given for other federal service, except where cross-service transferability is allowed. Military service is generally creditable toward the federal civilian retirement systems if military retired pay is waived. However, a deposit (equal to a percentage of post-1956 basic pay) must be made to the Civil Service Retirement Fund in order to receive credit. Military service is not generally creditable under both systems (but is for reservists and certain disability retirees).

### **Relationship of Retired Pay to Military Compensation**

Basic pay is the only element of military compensation upon which nondisability retired pay is based and entitlement is determined. Basic pay is the principal element of military compensation that all members receive, but it is not representative, for comparative purposes, of salary levels in the public and private sectors. Reasonable comparisons can be made to regular military compensation (RMC). RMC is the sum of (1) basic pay, (2) the housing allowance, which varies by grade, location, and dependency status, (3) the subsistence allowance and, (4) the tax advantages accruing to allowances because they are not subject to federal income tax. Basic pay represents approximately 69 percent of RMC for all retirement eligible members. For the 20-year retiree, basic pay is approximately 67 percent of RMC. Consequently, a member retired with 20-years of service and entitled to 50 percent of basic pay, would only receive 34 percent of RMC. For a 30-year retiree, the corresponding entitlements are 75 percent of basic pay, but only 55 percent of RMC. Public Law 109-364 allows members, retired since January 1, 2007, with greater than 30 years of service, to retire with entitlements exceeding 75 percent of basic pay. These relationships should be considered when military retired pay is compared to compensation under other retirement systems.

### **Social Security Benefits**

Many military members and their families receive monthly benefits indexed to the CPI from Social Security. As full participants in the Social Security system, military personnel are in general entitled to the same benefits and are subject to the same eligibility criteria and rules as other employees. Details concerning the benefits are covered in other publications.

Beginning in 1946, Congress enacted a series of amendments to the Social Security Act that extended some benefits to military personnel and their survivors. These “gratuitous” benefits were reimbursed out of the general fund of the U.S. Treasury. The Servicemen’s and Veterans’ Survivor Benefits Act brought members of the military into the contributory Social Security system effective January 1, 1957.

For the Old Age, Survivors, and Disability Insurance (OASDI) program, military members must contribute the employee portion of the OASDI payroll tax, with the federal government contributing the matching employer contribution. Only the basic pay of a military member constitutes wages for Social Security purposes. One feature of OASDI unique to military personnel grants a noncontributory wage credit of (i) \$300 for each quarter between 1956 and 1978 in which such personnel received military wages and (ii) up to \$1,200 per year after 1977 (\$100 of credit for each \$300 of wages up to a maximum credit of \$1,200). The purpose of this credit is to take into account elements of compensation such as quarters and subsistence not included in wages for Social Security benefit calculation purposes. Under the 1983 Social Security amendments, the cost of the additional benefits resulting from the noncontributory wage credits for past service was met by a lump sum payment from general revenues, while the cost for future service will be met by payment of combined employer-employee tax on such credits as the service occurs. Payments for these wage credits ended in 2002.

Members of the military are also required to pay the Hospital Insurance (HI) payroll tax, with the federal government contributing the matching employer contribution. Medicare eligibility occurs at age 65, or earlier if the employee is disabled.

### **Performance Measures**

During FY 2007, the Fund made monthly disbursements to approximately 2.1 million retirees and survivors.

While there are many ways to measure the funding progress of a pension plan, the ratio of assets in the fund to the present value of future benefits for annuitants on the roll is commonly used. (These values can be found in Table 7 of the main text). Here is what this ratio has been for the last twenty-two years:

- a. September 30, 2007 = .322
- b. September 30, 2006 = .328
- c. September 30, 2005 = .334
- d. September 30, 2004 = .338
- e. September 30, 2003 = .351
- f. September 30, 2002 = .378
- g. September 30, 2001 = .347
- h. September 30, 2000 = .354
- i. September 30, 1999 = .352
- j. September 30, 1998 = .331

- k. September 30, 1997 = .322
- l. September 30, 1996 = .313
- m. September 30, 1995 = .304
- n. September 30, 1994 = .303
- o. September 30, 1993 = .283
- p. September 30, 1992 = .270
- q. September 30, 1991 = .251
- r. September 30, 1990 = .219
- s. September 30, 1989 = .195
- t. September 30, 1988 = .162
- u. September 30, 1987 = .114
- v. September 30, 1986 = .072

The effective yield of the Fund during FY 2007 was 4.69%.



APPENDIX B

HISTORY OF THE MILITARY RETIREMENT SYSTEM

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## **HISTORY OF MILITARY RETIREMENT AND RETIRED PAY ADJUSTMENTS<sup>1</sup>**

The principal motivations guiding the evolution of the military retirement system have been to ensure that (1) continued service in the armed forces is competitive with the alternatives; (2) promotion opportunities are kept open for young and able members; (3) some measure of economic security is made available to members after retirement from a military career; (4) a pool of experienced personnel is available for recall in times of war or national emergency; and (5) the costs of the system are reasonable. The history of the retirement system shows an interplay of these considerations.

### **History of Retired Pay and Disability**

Provisions for the maintenance of disabled military members date to colonial days. The pilgrims at Plymouth provided in 1636 that any man sent forth as a soldier and returned maimed should be maintained by the colony during his life. In order to obtain enlistments in military expeditions against the Indians the colonies promised to care for those who were disabled and had no means of earning a livelihood as well as providing aid for the indigent families of those fallen in conflict. Some of these precedents were continued in the first national pension law of August 26, 1776, which promised half pay for life, or during disability, to the disabled. After the Revolutionary War, a full disability pension for a noncommissioned officer or private soldier was fixed at five dollars per month, with commissioned officers being paid at one-half of their monthly pay. Initially, the States administered disability pensions. However, in 1790, the Secretary of War became the principal pension administrator. In 1805, disability pensions were extended to those who received wounds in military service who subsequently became disabled.

Pensions based on service by itself were more controversial. Payments of half pay for life had been promised in 1780 by Congress for officers who served to the end of the War. However, the resulting claims were initially settled for less than full value and with a considerable amount of controversy. With the number of veterans declining and the treasury increasing, Congress became more generous. In 1818, an act was passed providing relief to Revolutionary War veterans in need. By 1832, it became full pay for life, regardless of need. In 1836, widows were included. This same pattern was followed for Service pensions for subsequent wars. However, each war was treated separately.

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<sup>1</sup> Sections of this are excerpted from (1) *Defense Manpower Commission Staff Studies*, Volume V, U.S. Government Printing Office, 1976 and (2) *Military Compensation Background Papers*, Third Quadrennial Review of Military Compensation, U.S. Government Printing Office, 1976. For a fuller discussion of the early history of military pensions, see *History of Military Pension Legislation in the United States*, William H. Glasson, AMS Press, New York, N.Y. 1968.

In 1849, the Bureau of Pensions was transferred to the newly established Department of the Interior, where it was to remain until the Veterans Administration was created in 1930. In 1855, authorization was given for involuntary separation with partial pay of Navy officers adjudged incapable, but not necessarily disabled. The outbreak of the Civil War brought further changes when it became necessary to retire older officers no longer fit for field duty. The vehicle was the act of August 3, 1861, the first major nondisability retirement act, which provided for the voluntary retirement of regular officers of all branches of Service after 40 years of duty, at the discretion of the President. Subsequent acts in 1861 and 1862 provided for involuntary retirements for age or years of service.

The 1861 act also established a military disability retirement system that covered the regular officers of all branches of Service. Army and Marine Corps officers were to be paid an amount equal to their “pay proper” plus four rations. Navy officers were paid slightly more. The act of March 2, 1867, authorized disability retirement for enlisted personnel of the Navy and Marine Corps.

Congress established two enduring retirement principles while reducing forces to a peacetime basis in 1870. The first permitted voluntary retirement of officers after 30 years of service upon approval by the President, and the second fixed retired pay at 75 percent of the officer’s pay. The 75 percent applied to Army and Marine Corps officers, both disabled and nondisabled, and was extended to the Navy in 1873.

In 1885, the first nondisability retirement law for Army and Marine Corps enlistees was enacted. Paralleling the officer retirement laws, it provided for voluntary retirement at 30 years of service with 75 percent of pay of the grade in which retired, plus an allowance in lieu of quarters, fuel, and light. The law was extended to the Navy in 1899.

By the middle of World War I, the limit on the number of officers who could be placed on the retired list was causing stagnating promotion in the Navy. To alleviate the problem, Congress established selection boards for promotion to Rear Admiral, Captain, and Commanders on the basis of age-in-grade in 1916. Service-in-grade replaced age-in-grade in 1926. Those officers not selected for promotion were retired at 2 ½ percent of pay per year of service, not to exceed 75 percent of pay. This was the first recognition of length of service as well as grade in the computation of retired pay.

The act of 1916 also created the Fleet Naval Reserve, to provide a pool of experienced personnel who could be recalled to active duty in an emergency. While technically different than retirement, the practical effect was that it was possible for enlistees of the Navy and Marine Corps to “retire” with as little as 16 years of service (raised to 20 in 1925) and become entitled to “retainer pay.”

By 1938, the Navy was again experiencing stagnating promotion caused by the large influx of officers throughout World War I. Almost all of these officers were in the same age and years of service groups. To remedy the situation, Congress extended the selection board process to all grades above Lieutenant (junior grade); set limits on years of service for Lieutenant

Commanders through Captains; and provided for voluntary retirement at 20 years of service at the discretion of the President.

Following World War II, allegations of unfairness, inequity, and inefficiency in the existing disability retirement system became extensive. A new system for disability retirement was created by the Career Compensation Act of 1949. Under this system, all disabilities had to be rated under the standard schedule of rating disabilities in use by the Veterans Administration, and the resultant ratings became a factor in disability retired pay entitlement and taxability. The new system covered officer and enlisted personnel of both the regular and reserve components, and it authorized temporary as well as permanent disability retirements. The disability retirement system remains basically unchanged from the way it was enacted in 1949. Much legislation has been passed recently in an attempt to modernize the disability system.

Meanwhile, the Officer Personnel Act of 1947 brought the Army and Air Force under a selection process similar to the Navy system. It also provided that those officers who failed promotion and were not eligible to retire would receive severance pay of two months per year of service, but not exceeding two years' pay.

Standardized nondisability retirement laws for all Services were brought about by the Army and Air Force Vitalization Act of 1948. The act established 20 years as the minimum requirement for voluntary retirement, thereby placing the Army and Air Force on a par with the Navy. It also provided for the removal of substandard officers with severance pay equal to one month's pay per year of service, but not exceeding one year's pay.

Public Law 96-513 changed the retired pay formula for persons who first became a service member after September 7, 1980. For this group, the 2 ½ percent times years of service is multiplied by the average of the highest 36 months of pay, rather than by final pay. This is sometimes referred to as the High-3 (HI-3) formula.

Public Law 99-348, enacted July 1, 1986, made extensive changes in retired pay formula for persons entering service after July 31, 1986. These persons are credited with 2 percent for each of the first twenty years of service, 3 ½ percent for each of the next 10 years, and 2 ½ percent thereafter. At the member's age 62, the annuity is recomputed to equal the annuity that would have been in effect if a level 2 ½ percent had been used for each year of service. In addition, the cost-of-living adjustment for this group no longer keeps up with inflation, as described later. This is referred to as the Redux benefit formula.

Public Law 106-65, enacted October 1, 1999, enhanced benefits for military members previously covered by the Redux benefit formula (those who entered service on or after August 1, 1986) by converting these members to the HI-3 formula. At the 15 year-of-service mark, these (full-time) members now have the choice of: (1) remaining in HI-3, or (2) electing the Career Status Bonus, which is not paid out of the Military Retirement Fund, and converting to the Redux benefit formula. Those who elect the bonus must commit to remaining continuously in service until completing 20 years or forfeit a portion of the \$30,000. Part-time reservists previously covered by Redux do not have the option of electing the bonus, and so remain under

the HI-3 benefit formula. This is referred to as the Career Status Bonus (CSB)/Redux benefit formula.

Public Law 108-136, enacted November 23, 2003, provides a phase-out of the offset to military retired pay due to receipt of Veterans Affairs (VA) disability compensation for members whose combined disability rating is 50% or greater, effective January 1, 2004. Members retired under disability provisions must have at least 20 years of service. Public Law 108-136 also expands eligibility under the Combat Related Special Compensation program to include qualified retirees at any combined percentage rating for certain combat-related disabilities compensated by the VA. Through 2003, retired pay earned from DoD for military service was offset by any payment received from Veterans Affairs for a VA-rated disability. These VA benefits were in place of or in combination with DoD retired pay but were not fully additive. Thus the law is commonly referred to as Concurrent Receipt.

Public Law 109-364, enacted October 17, 2006, eliminated the 75 percent multiplier cap for retirements exceeding 30 years of service for members retiring after January 1, 2007. A member can now retire with a retired pay multiplier greater than 100% if their years of service exceeds 40.

Public Law 110-181, enacted January 28, 2008, reduces the retirement age for a reserve retirement below age 60 by three months for every 90 days of certain active service with a limit of 10 years. Eligibility for retiree health benefits remains at age 60 even if the eligibility age for retired pay is reduced.

### **Cost-of-Living Adjustments**

Prior to 1958, retired pay was generally increased in direct proportion to changes in active duty pay. The practice was discontinued with the act of May 1958 (Public Law 85-422), when it was realized that a single 6 percent cost-of-living increase would cost only \$35 million, as opposed to \$65 million for linking the retired pay to active duty pay. The 6 percent approximated the increase in the cost of living since 1955 when retired pay was last increased. In 1963, a permanent system of increasing retired pay (Public Law 88-132), based on a formula geared to increases in the cost-of-living, was adopted. In 1965, the adjustment mechanism was modified slightly (Public Law 89-132). This system granted cost-of-living increases whenever the Consumer Price Index (CPI) went up at least 3 percent and remained up for three months. The benefit increase was equal to the percentage rise in the CPI. In 1969 (Public Law 91-179), an additional 1 percent was added to compensate for the fact that five months elapsed between the time that the index increased 3 percent and the time that benefits increased.

Effective March 1977, cost-of-living adjustments (COLAs) were scheduled to occur every six months, on March 1 and September 1. This would be reflected in checks issued those months and the additional 1 percent was eliminated (Public Law 94-440). The cost-of-living increase, effective March 1, was computed by calculating the percentage increase (adjusted to the nearest tenth of a percent) in the CPI from the previous June to the previous December.

Similarly, the cost-of-living increase effective September 1 was obtained by calculating the percentage increase in the June CPI over the CPI from the previous December.

In August 1981 (Public Law 97-35), once-a-year cost-of-living increases were implemented by eliminating the September increase. Full annual cost-of-living increases were given in March of each year based on the percentage increase in the CPI between the two previous Decembers.

In August 1982, Public Law 97-253 created a temporary deviation to the calculation and timing of the cost-of-living increase. Consequently, in FY83, the increase was delayed until April and the full increase of 3.9 percent was given only to survivors, disabled persons and nondisabled persons over age 61. Nondisabled retirees under age 62 received 3.3 percent instead of 3.9 percent.

Public Law 98-270, enacted in April 1984, eliminated the FY84 increase and modified the permanent law. Under the modified system, the COLA equals the percentage increase in the average of the CPIs for July, August, and September over the averaged indexes for the same three months of the prior year. These increases become effective for entitlements earned in December. Public Law 98-369 directed that entitlements for a particular month should be paid at the beginning of the subsequent month rather than at the end of the month of entitlement and became effective with the December 1984 adjustment.

Public Law 99-348, enacted July 1, 1986, changed the cost-of-living increase for members entering the service after July 31, 1986. Their retiree and survivor benefits are increased annually by the full cost-of-living adjustment minus 1 percent (except if the full adjustment is less than or equal to 1%). A one-time catch-up is given on the first day of the month after the *retiree's* 62nd birthday. At this time, the retiree benefit (or survivor benefit if the retiree is deceased) is increased to the amount that would have been payable had full adjustments been made. Annual partial increases continue after this catch-up. For persons entering the service prior to August 1, 1986, full COLAs are still applied to the retiree and survivor benefits. Public Law 106-65 called for full COLAs to be applied to the retiree and survivor benefits of post-July 31, 1986, entrants who decline the CSB/Redux and retire under the HI-3 benefit formula. Retired pay increases from 1958 to the present time are shown in Table B-1 and basic pay increases are shown in Table B-2.

### **Funding of Retirement Benefits**

Prior to 1935, the Navy had a pension fund which provided for payments to persons retired for disability whenever there was a sufficient amount in the fund. The income to the fund consisted of the government's share of the proceeds from the sale of enemy or pirate ships captured by the Navy, and from interest received on fund investments. This fund was abolished in 1935, and the military retirement system moved to an unfunded or "pay-as-you-go" basis. Public Law 98-94 (currently Chapter 74 of Title 10, U.S.C.), signed in September 1983, established a Military Retirement Fund starting October 1, 1984.

This funding law stated that DoD will make normal cost payments into the Fund and the Treasury Department will make payments from general revenues to amortize the unfunded liability. Public Law 99-661, enacted in November 1986, mandated that two separate normal cost percentages (NCPs) be used to compute the normal cost payment of the military retirement system. One NCP is for active-duty personnel and reservists (full-time) and the second NCP is for drilling reservists (part-time). These normal cost payments are designed to be sufficient to pay for the future retirement benefits for a cohort of new entrants. The unfunded liability exists primarily because such payments were not made in the past.

Public Law 108-136, enacted November 2003, required the Department of Treasury to pay the normal cost arising from the increased benefits due to Concurrent Receipt at the beginning of each fiscal year. Beginning with FY2005, Treasury includes the annual normal cost payment along with the unfunded liability payment in the October 1<sup>st</sup> contribution.

The original funding law also established an independent three-member DoD Retirement Board of Actuaries, appointed by the President (changed to the Secretary of Defense as part of the 2008 National Defense Authorization Act). The Board is required to approve methods and assumptions for determining the normal cost and unfunded liability; to review valuations of the military retirement system; to determine the method of amortizing unfunded liabilities; to annually report to the Secretary of Defense; and to report to the President and Congress on the status of the Fund not less than every four years. The 2008 National Defense Authorization Act renamed the Board the “DoD Board of Actuaries,” and added oversight of other funds to be deemed necessary by the Secretary of Defense.

TABLE B-1

**MILITARY RETIRED PAY COST-OF-LIVING INCREASES  
(JUNE 1958 TO PRESENT)**

<u>Date of Increase</u>		<u>Percentage Increase</u>	<u>Cumulative % From Date of Increase</u>
6/1/58		6.0%	672.3%
10/1/63		5.0%	628.5%
9/1/65		4.4%	593.8%
12/1/66		3.7%	564.6%
4/1/68		3.9%	540.9%
2/1/69		4.0%	516.8%
11/1/69		5.3%	493.1%
8/1/70		5.6%	463.3%
6/1/71		4.5%	433.4%
7/1/72	one percent over inflation was added during these years	4.8%	410.4%
7/1/73		6.1%	387.0%
1/1/74		5.5%	359.0%
7/1/74		6.3%	335.1%
1/1/75		7.3%	309.3%
8/1/75		5.1%	281.5%
3/1/76		5.4%	263.0%
3/1/77		4.8%	244.4%
9/1/77		4.3%	228.6%
3/1/78		2.4%	215.0%
9/1/78	twice-a-year increases	4.9%	207.7%
3/1/79		3.9%	193.3%
9/1/79		6.9%	182.3%
3/1/80		6.0%	164.1%
9/1/80		7.7%	149.1%
3/1/81	once-a-year increases (Dec to Dec)	4.4%	131.3%
3/1/82		8.7%	121.6%
4/1/83		3.9%	103.8%
12/1/84		3.5%	96.2%
12/1/85		0.0%	89.5%
12/1/86	once-a-year increases (3rd qtr to 3rd qtr)	1.3%	89.5%
12/1/87		4.2%	87.1%
12/1/88		4.0%	79.6%
12/1/89		4.7%	72.7%
12/1/90		5.4%	64.9%
12/1/91		3.7%	56.5%
12/1/92		3.0%	50.9%
3/1/94		2.6%	46.5%
3/1/95		2.8%	42.8%
3/1/96		2.6%	38.9%
12/1/96		2.9%	35.4%
12/1/97		2.1%	31.5%
12/1/98		1.3%	28.8%
12/1/99		2.4%	27.2%
12/1/00		3.5%	24.2%
12/1/01		2.6%	20.0%
12/1/02		1.4%	17.0%
12/1/03		2.1%	15.4%
12/1/04		2.7%	13.0%
12/1/05		4.1%	10.0%
12/1/06		3.3%	5.7%
12/1/07		2.3%	2.3%

(1) Nondisabled retirees under age 62 received 3.3%.

(2) Starting December 1984, entitlements earned in a particular month are paid at the beginning of the next month.

(3) A cost-of-living adjustment of 3.1%, scheduled for 12/1/85, was suspended as a consequence of P.L. 99-177.

(4) Disabled retirees and survivors received 2.6% on 12/1/93.

(5) Disabled retirees and survivors received 2.8% on 12/1/94.

(6) Disabled retirees and survivors received 2.6% on 12/1/95.



**TABLE B-2**  
**MILITARY BASIC PAY SCALE INCREASES**  
**(JUNE 1958 TO PRESENT)**

<u>Date of Increase</u>	<u>Percentage Increase</u>	<u>Cumulative % From Date of Increase</u>
6/1/58	8.3%	1126.1%
10/1/63	14.2%	1032.1%
9/1/64	2.3%	891.3%
9/1/65	10.4%	869.1%
7/1/66	3.2%	777.8%
10/1/67	5.6%	750.5%
7/1/68	6.9%	705.4%
7/1/69	12.6%	653.5%
1/1/70	8.1%	569.1%
1/1/71	7.9%	519.0%
11/14/71	11.6%	473.7%
1/1/72	7.2%	414.1%
10/1/72	6.7%	379.5%
10/1/73	6.2%	349.4%
10/1/74	5.5%	323.2%
10/1/75	5.0%	301.1%
10/1/76	3.6%	282.0%
10/1/77	6.2%	268.7%
10/1/78	5.5%	247.2%
10/1/79	7.0%	229.1%
10/1/80	11.7%	207.6%
10/1/81	14.3% (1)	175.4%
10/1/82	4.0% (2)	140.9%
1/1/84	4.0% (2)	131.6%
1/1/85	4.0%	122.7%
10/1/85	3.0%	114.2%
1/1/87	3.0%	107.9%
1/1/88	2.0%	101.9%
1/1/89	4.1%	97.9%
1/1/90	3.6%	90.1%
1/1/91	4.1%	83.5%
1/1/92	4.2%	76.3%
1/1/93	3.7%	69.2%
1/1/94	2.2%	63.1%
1/1/95	2.6%	59.6%
1/1/96	2.4%	55.6%
1/1/97	3.0%	51.9%
1/1/98	2.8%	47.5%
1/1/99	3.6%	43.5%
1/1/00	4.8% (3)	38.5%
1/1/01	3.7% (3)	32.2%
1/1/02	4.6% (3)	27.5%
1/1/03	4.1% (3)	21.8%
1/1/04	3.7% (3)	17.0%
1/1/05	3.5%	12.9%
1/1/06	3.1%	9.1%
1/1/07	2.2% (3)	5.8%
1/1/08	3.5%	3.5%

(1) Basic pay increases for enlisted personnel ranged from 10% for E-1; 10.7% for E-2, E-3; 13% for E-4; 16.5% for E-5, E-6; and 17% for E-7, E-8, E-9. For officers, the increase was 14.3%.

(2) Except for E-1 with less than 4 months service.

(3) The increases do not include additional targeted pay increases.



## APPENDIX C

### VALUATION POPULATION DATA

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DoD Officers Average Monthly Active Duty Basic Pay by Active Years of Service and Age for FY2007 Valuation

Age	Completed Years of Active Service																														
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30+
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	2498	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2488
20	2571	2521	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2548
21	2576	2622	2766	3054	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2645
22	2567	2663	2932	3031	3014	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2681
23	2573	2595	3036	3250	3088	3077	2721	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2596
24	2592	2623	3313	3484	3365	3208	3255	2556	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2624
25	2651	2703	3361	3926	3629	3519	3378	3416	3726	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3322
26	2939	2789	3435	3960	4425	3855	3715	3453	3557	4114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3794
27	3114	3042	3446	3981	4453	4441	4048	3840	3562	3533	3776	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4055
28	3168	3197	3585	3971	4419	4485	4646	4127	3847	3652	3715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4184
29	3155	3195	3776	4023	4371	4485	4707	4670	4083	3629	3848	0	5157	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4324
30	3330	3313	3715	4085	4377	4421	4688	4724	4868	4075	3856	3883	4062	4707	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4432
31	3509	3378	3757	4115	4447	4477	4662	4745	4941	4890	4131	3962	4084	4186	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4548
32	3471	3619	3929	4192	4437	4511	4753	4662	4941	5024	5396	4326	4308	4174	4445	5543	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4742
33	3648	3764	4097	4278	4458	4544	4824	4860	5011	5051	5534	5435	4977	4394	4479	4666	4575	0	0	0	0	0	0	0	0	0	0	0	0	0	4857
34	3796	3868	4257	4358	4594	4571	4795	4902	5094	5065	5502	5623	5742	4786	4669	4855	4775	4720	0	0	0	0	0	0	0	0	0	0	0	0	5137
35	3734	3954	4265	4475	4627	4649	4873	4953	5128	5193	5417	5596	5732	5768	5042	4887	4920	5057	5628	0	0	0	0	0	0	0	0	0	0	0	5319
36	3650	4300	4296	4710	4705	4796	4897	4948	5265	5175	5470	5536	5837	5960	5932	5180	5056	5107	5216	6007	0	0	0	0	0	0	0	0	0	0	5575
37	3903	4467	4371	4786	4828	5020	5128	5062	5272	5282	5573	5594	5789	5944	6099	5988	5278	5255	5241	5415	5435	0	0	0	0	0	0	0	0	0	5629
38	3999	4397	4573	4859	5045	5016	5312	5149	5330	5424	5518	5679	5678	5877	6075	6241	6342	5504	5472	5395	5914	0	0	0	0	0	0	0	0	0	5812
39	4238	4647	4722	5034	5182	5202	5361	5436	5537	5565	5579	5648	6019	5905	6094	6259	6492	6575	5590	5526	5611	5608	5723	0	0	0	0	0	0	0	6001
40	4243	4874	4927	5271	5387	5149	5450	5487	5642	5642	5643	5787	5852	6010	6120	6286	6498	6738	6744	5635	5724	5648	5792	5732	5543	0	0	0	0	0	6211
41	4418	4812	4968	5140	5450	5445	5477	5627	5804	5778	5752	5851	5897	6140	6244	6343	6448	6711	6916	6841	5862	5816	5854	5881	6858	0	0	0	0	0	6414
42	4055	4761	5122	5291	5566	5880	5755	5630	5824	5809	6040	5787	6102	6134	6223	6385	6549	6648	6914	7018	7062	6108	5956	6003	6111	5505	0	0	0	0	6574
43	4223	4458	5289	5349	5522	5682	5781	5875	5890	5939	6002	6235	6179	6092	6364	6293	6595	6721	6876	7009	7213	7216	6211	6062	6155	6269	6698	6113	0	0	6804
44	4891	4697	5213	5468	5528	5579	5682	5855	5706	5919	6206	6276	6314	6396	6535	6619	6679	6788	6884	6952	7185	7432	7765	6542	6218	6306	6468	6272	0	0	6894
45	4306	5111	5498	5476	5675	5630	5701	5933	6107	6051	6037	6319	6357	6504	6592	6614	6725	6805	6979	7068	7143	7428	7958	7957	6672	6495	6542	6594	5954	0	7097
46	4941	4448	5867	5310	5525	5639	5005	5051	5871	6476	6306	6054	6423	6641	6792	6580	6759	6894	6996	7160	7371	7344	7610	8161	8229	6957	6653	6706	7009	7417	7409
47	4809	4862	5753	5919	5530	5659	5332	5905	5756	6158	6221	6466	6454	6773	6635	6805	6767	7004	7046	7136	7478	7603	7756	7979	8473	8524	7333	6892	6907	7073	7291
48	5386	5221	6074	5783	5550	5876	6216	6169	5692	5934	6367	6565	6396	6498	6455	6785	6935	7105	7022	7147	7493	7680	7877	7910	8284	8592	8870	7600	7602	7153	7620
49	5050	5464	5431	5233	5537	6242	6860	5618	5775	5825	6263	6475	6514	6898	6634	6876	6920	7347	7129	7365	7314	7606	8094	8199	8167	8500	8994	9128	7717	7421	7612
50	6465	5464	5992	5795	5958	5408	6271	6512	6101	6441	6552	6627	6651	6681	7009	6576	7012	7125	7532	7196	7624	7725	7935	8137	8364	8569	8969	8952	9297	7765	7947
51	5827	6782	6496	6936	5368	5487	6750	6369	6426	6613	6156	6219	6629	6779	6965	6732	7038	7159	7307	7392	7611	7663	8043	8164	8431	8649	8819	8738	9241	9589	8144
52	7018	7072	6951	6132	6444	5917	6619	6627	6323	6445	6792	6490	7077	6947	6930	6740	7128	7200	7542	7326	7712	7924	7945	8074	8299	8657	8752	8698	9015	9659	9388
53	7653	6391	7676	6039	5466	6412	5889	6421	6369	5969	6507	6462	6518	6966	6831	7371	7152	7114	7004	7360	7440	7910	7947	8270	8562	8528	8657	8975	9018	9245	10057
54	6425	6442	6431	6024	5831	6285	5862	7473	6163	7382	6520	6716	7366	6794	6614	7062	7071	7377	7403	7618	7761	8204	8275	7968	8776	8712	8884	8920	8827	10067	8359
55	5237	7494	7773	0	6457	6607	6464	5886	6985	6113	6862	6463	6901	7071	7001	7368	7502	7214	7434	7599	7748	7966	7677	8307	8347	8549	8665	8564	9235	10674	8502
56	5231	8414	7441	5799	5767	6608	7679	6624	6867	8060	6530	7333	6814	6374	7297	7693	7248	7310	7729	7746	7803	7682	8154	8208	8787	8106	8975	8813	9223	10906	8709
57	4492	6355	6993	4766	6863	6233	6318	8193	7141	7093	6961	6791	7700	7856	6988	7241	7563	7484													

DoD Enlisted Average Monthly Active Duty Basic Pay by Active Years of Service and Age for FY2007 Valuation

Age	Completed Years of Active Service																																	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30+	Avg		
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.333	
17	1,333	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,370	
18	1,368	1,554	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,448	
19	1,403	1,568	1,772	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,559	
20	1,453	1,579	1,756	1,919	2,135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,671	
21	1,467	1,595	1,770	1,935	2,109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,786	
22	1,483	1,604	1,785	1,946	2,101	2,159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,885	
23	1,504	1,612	1,799	1,959	2,106	2,169	2,356	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,979	
24	1,527	1,627	1,817	1,972	2,119	2,175	2,364	2,405	2,135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,074	
25	1,552	1,643	1,833	1,985	2,134	2,185	2,366	2,413	2,570	2,456	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,167	
26	1,567	1,656	1,856	2,000	2,141	2,200	2,372	2,411	2,644	2,686	2,528	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,274	
27	1,603	1,670	1,870	2,019	2,167	2,218	2,381	2,424	2,630	2,690	2,827	2,620	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,373	
28	1,608	1,689	1,883	2,044	2,195	2,238	2,398	2,438	2,635	2,687	2,856	2,908	2,931	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,469	
29	1,651	1,707	1,905	2,062	2,212	2,266	2,419	2,457	2,646	2,684	2,846	2,905	2,971	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,564	
30	1,681	1,737	1,941	2,074	2,231	2,282	2,438	2,471	2,659	2,696	2,847	2,896	3,074	3,154	3,018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,662	
31	1,705	1,738	1,976	2,104	2,254	2,304	2,455	2,503	2,674	2,718	2,855	2,901	3,068	3,133	3,045	2,906	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,764	
32	1,724	1,790	1,994	2,109	2,262	2,325	2,486	2,511	2,691	2,742	2,872	2,906	3,066	3,123	3,281	3,267	2,705	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,873	
33	1,786	1,823	2,023	2,173	2,300	2,340	2,514	2,563	2,720	2,750	2,876	2,932	3,067	3,135	3,284	3,319	3,275	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,974	
34	1,760	1,835	2,071	2,192	2,325	2,405	2,535	2,567	2,745	2,768	2,905	2,958	3,077	3,135	3,255	3,302	3,430	3,383	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,073	
35	1,813	1,900	2,133	2,265	2,375	2,454	2,566	2,619	2,786	2,820	2,929	2,967	3,103	3,147	3,259	3,303	3,424	3,494	3,795	2,646	0	0	0	0	0	0	0	0	0	0	0	0	3,182	
36	1,899	1,942	2,169	2,322	2,419	2,498	2,649	2,698	2,895	2,911	2,934	2,988	3,107	3,171	3,267	3,304	3,423	3,471	3,648	3,748	3,228	0	0	0	0	0	0	0	0	0	0	0	0	3,293
37	1,994	2,050	2,200	2,355	2,448	2,576	2,762	2,740	2,914	2,898	3,001	3,056	3,149	3,196	3,307	3,324	3,437	3,474	3,615	3,702	3,696	0	0	0	0	0	0	0	0	0	0	0	3,398	
38	1,977	2,119	2,571	2,391	2,529	2,576	2,742	2,777	2,937	2,931	2,998	3,076	3,198	3,257	3,310	3,330	3,448	3,484	3,620	3,694	3,914	4,141	0	0	0	0	0	0	0	0	0	0	3,497	
39	2,006	2,075	2,743	2,711	2,511	2,644	2,763	2,864	2,956	3,045	3,073	3,144	3,204	3,304	3,362	3,372	3,454	3,504	3,617	3,674	3,908	4,010	4,153	0	0	0	0	0	0	0	0	0	3,592	
40	1,999	2,240	2,895	2,939	2,679	2,651	2,833	2,923	3,023	3,075	3,130	3,150	3,230	3,321	3,392	3,383	3,465	3,526	3,614	3,675	3,894	4,012	4,281	4,080	2,722	0	0	0	0	0	0	0	3,687	
41	2,072	2,269	2,868	2,937	3,056	2,905	2,849	2,963	3,056	3,057	3,184	3,199	3,260	3,342	3,410	3,454	3,507	3,558	3,629	3,678	3,916	4,001	4,248	4,392	4,240	3,263	0	0	0	0	0	0	3,779	
42	2,058	2,473	2,958	2,843	2,984	3,138	3,076	2,941	3,002	3,129	3,164	3,225	3,359	3,379	3,422	3,433	3,536	3,567	3,666	3,676	3,904	4,028	4,244	4,423	4,756	4,387	0	0	0	0	0	0	3,915	
43	2,600	2,521	3,098	3,159	3,113	3,184	3,427	3,459	3,141	3,156	3,270	3,266	3,421	3,464	3,488	3,469	3,552	3,609	3,664	3,717	3,935	4,042	4,246	4,442	4,739	4,906	5,427	0	0	0	0	0	4,029	
44	3,315	3,035	3,125	3,140	3,238	3,282	3,548	3,589	3,236	3,168	3,301	3,330	3,343	3,540	3,567	3,583	3,589	3,702	3,717	3,757	3,978	4,068	4,242	4,429	4,671	4,856	5,393	5,706	0	0	0	0	4,147	
45	3,297	3,418	3,374	3,206	3,248	3,275	3,573	3,744	3,658	3,493	3,345	3,346	3,495	3,603	3,607	3,611	3,707	3,720	3,781	3,730	3,972	4,099	4,272	4,447	4,690	4,901	5,380	5,520	4,770	0	0	0	4,240	
46	3,157	3,624	3,538	3,229	3,220	3,435	3,498	3,671	3,709	3,562	3,571	3,249	3,565	3,554	3,706	3,690	3,797	3,779	3,788	3,753	4,014	4,101	4,317	4,450	4,705	4,969	5,458	5,494	5,622	5,706	0	0	4,240	
47	3,341	3,666	3,781	3,322	3,395	3,549	3,317	3,606	3,740	3,746	3,564	3,612	3,430	3,602	3,549	3,657	3,721	3,709	3,825	3,753	4,051	4,173	4,303	4,437	4,690	4,955	5,351	5,473	5,657	5,689	5,171	4,274		
48	3,563	3,679	3,750	3,438	3,826	3,463	3,310	3,597	3,618	3,694	3,708	3,774	3,678	3,473	3,705	3,652	3,725	3,651	3,790	3,843	4,037	4,144	4,277	4,478	4,673	4,890	5,339	5,492	5,650	5,754	5,854	4,347		
49	3,997	3,749	3,458	3,667	3,842	3,785	3,723	3,479	3,513	3,711	4,021	3,791	3,909	3,654	3,512	3,638	3,706	3,736	3,837	3,879	4,181	4,220	4,341	4,426	4,680	4,907	5,314	5,470	5,652	5,800	5,968	4,366		
50	2,855	4,253	3,774	3,813	3,638	3,672	3,816	3,895	3,769	3,673	3,732	3,883	3,961	3,926	3,747	3,741	3,674	3,716	3,882	3,871	4,184	4,265	4,317	4,547	4,787	4,810	5,374	5,558	5,740	5,751	5,736	4,374		
51	3,845	3,815	3,910	3,593	4,254	3,803	3,688	3,630	4,024	3,347	3,630	3,859	3,781	3,818	4,104	4,032	3,695	3,851	3,915	3,909	4,204	4,174	4,530	4,402	4,781	4,905	5,364	5,645	5,703	5,786	5,555	4,351		
52	3,643	4,114	4,173	3,793	4,291	4,002	4,173	3,688	4,151	3,873	3,628	3,766	4,368	3,871	4,081	4,279	4,558	4,012	3,735	3,743	4,110	4,583	4,525	4,686	4,709	4,949	5,332	5,609	5,698	5,764	5,590	4,385		
53	3,692	4,273	4,373	3,793	4,291	4,002	4,173	3,688	4,151	3,873	3,628	3,766	4,368	3,871	4,081	4,279																		

All DOD Average Monthly Active Duty Basic Pay by Active Years of Service and Age for FY2007 Valuation

Age	Completed Years of Active Service																																
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30+	Avg	
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	1333	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1333
18	1368	1554	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1370
19	1403	1568	1772	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1449
20	1454	1579	1736	1919	2135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1559
21	1469	1596	1770	1935	2109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1672
22	1628	1609	1786	1947	2103	2159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1805
23	1804	1767	1807	1961	2107	2172	2376	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1932
24	1737	1940	2096	1983	2124	2178	2366	2408	2135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2068
25	1671	1877	2404	2319	2158	2196	2372	2421	2592	2456	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2217
26	1743	1806	2278	2659	2634	2235	2387	2419	2661	2799	2528	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2377
27	1885	1903	2155	2492	3023	2765	2436	2446	2645	2714	2898	2620	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2537
28	1862	2008	2249	2395	2863	3137	2978	2514	2666	2720	2895	2908	2931	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2688
29	1887	2000	2360	2446	2669	2983	3435	3070	2706	2720	2885	2960	2971	5157	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2794
30	1913	2038	2372	2521	2750	2813	3304	3486	3308	2765	2891	2953	3151	3436	3018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2928
31	1981	2097	2372	2519	2839	2908	3102	3389	3709	3351	2942	2968	3141	3226	3045	2906	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3059
32	1974	2124	2440	2526	2831	2990	3175	3167	3609	3806	3643	3025	3158	3216	3408	3793	2705	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3209
33	2060	2155	2469	2650	2877	2981	3315	3321	3434	3724	4085	3720	3229	3240	3379	3479	3816	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3362
34	2053	2197	2542	2666	2832	3072	3271	3444	3603	3593	3980	4236	4054	3340	3382	3440	3593	3486	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3510
35	2047	2204	2581	2723	2870	3086	3289	3407	3677	3708	3802	4092	4489	4156	3472	3598	3707	4139	2646	0	0	0	0	0	0	0	0	0	0	0	0	0	3644
36	2150	2263	2634	2740	2923	3177	3336	3403	3550	3767	3899	3993	4384	4685	4237	3557	3813	3651	3871	4014	3228	0	0	0	0	0	0	0	0	0	0	0	3774
37	2254	2518	2540	2910	2963	3213	3449	3454	3698	3632	4025	4038	4241	4574	4809	4325	3717	3667	3803	3953	4483	3696	0	0	0	0	0	0	0	0	0	0	3912
38	2261	2656	3103	2908	3090	3193	3462	3480	3712	3777	3812	4158	4340	4440	4795	4880	4593	3763	3818	3899	4187	4880	0	0	0	0	0	0	0	0	0	0	4082
39	2366	2634	3454	3396	3114	3310	3661	3645	3739	3914	3920	4024	4446	4427	4567	4798	5129	4715	3882	3881	4152	4281	4545	0	0	0	0	0	0	0	0	0	4222
40	2358	2747	3572	3824	3386	3317	3589	3618	3755	3918	3968	4009	4249	4490	4638	4628	5103	4858	3971	4145	4262	4567	5071	4133	0	0	0	0	0	0	0	0	4413
41	2393	2714	3688	3653	3981	3803	3622	3654	3827	3910	3937	4033	4227	4458	4749	4783	5132	5533	4870	4199	4238	4517	4672	5549	3263	0	0	0	0	0	0	0	4607
42	2287	3059	3709	3348	4054	4186	4019	3637	3809	3839	4139	3969	4417	4603	4532	4760	4775	4831	5379	5532	5125	4325	4512	4727	5099	4759	0	0	0	0	0	0	4783
43	2925	3079	3714	4001	4080	4282	4396	4323	3846	4044	4233	4299	4469	4434	4450	4603	4822	4891	5028	5440	5738	5376	4548	4722	5084	5188	6096	6113	0	0	0	0	4960
44	3837	3547	3812	3873	4180	4109	4484	4476	3960	3950	4238	4189	4553	4434	4695	4725	4828	5053	5115	5105	5554	5914	5876	4784	4984	5139	5680	5832	0	0	0	0	5125
45	3506	4034	4207	3885	4181	4178	4539	4779	4809	4468	3954	4634	4453	4650	4727	4717	4842	4875	5134	5090	5374	5784	6399	6111	5119	5222	5653	5853	5051	5954	0	0	5327
46	3950	3957	4156	3939	4136	4212	4541	4734	4728	4804	4597	4081	4680	4570	4799	4891	5054	4979	5058	5192	5368	5631	6305	6635	6740	5505	5767	5763	6014	6561	7409	5960	
47	3986	4293	4464	4944	4277	4520	4144	4547	4617	4653	4851	4588	4474	4757	4692	4873	4918	4911	5031	5085	5638	5807	5917	6329	7147	7252	5968	5882	6103	6099	6585	5754	
48	4146	4243	4494	4353	4525	4362	4732	4421	4382	4362	4838	5094	4878	4422	4581	4891	4847	4935	5103	5205	5418	5704	5973	6176	6961	7545	7921	6154	6126	6171	6819	5939	
49	4465	4217	4444	4379	4754	4919	5339	4111	4811	4612	5085	4886	5563	5140	4574	5002	4907	5021	5118	5181	5595	5816	6250	6308	6599	7288	8173	8446	6413	6223	7102	6204	
50	4515	4877	4924	4764	4715	4683	4914	5399	4617	4923	5173	5026	5398	5490	5419	4861	4752	5152	4977	5143	5679	6003	6012	6390	6644	7151	8149	8358	8594	6501	7177	6043	
51	4777	4945	5289	5773	4857	4274	5061	4758	4799	4760	4627	5130	5896	5299	5759	5542	5122	5235	5394	5464	5505	6107	6298	6398	6948	7107	7903	8098	8539	8704	7361	6559	
52	4709	5692	5840	4766	5076	4755	5619	5168	5512	5081	4980	4901	5539	5696	5649	5510	5499	5352	5413	5201	5743	5815	5699	6587	6795	7577	7978	7705	8368	8939	8676	6647	
53	4514	5586	5971	4566	5605	5699	5031	4988	4943	4542	4862	4736	5779	5299	5360	6182	6302	5811	5250	5504	5413	6269	6460	6789	7311	7394	8341	7746	8084	8130	9544	6740	
54	5235	4805	3899	4071	5068	5741	4753	5389	5051	5497	5738	4837	5537	5431	5314	6188	5772	6072	5763	5975	5843	6282	6370	6777	6779	7686	8042	5088	8494	8067	9709	6946	
55	4774	6777	5961	3786	5019	5333	4597	4770	5610	3359	5608	5220	5997	5602	5922	6400	6446	5887	6193	5877	5810	6678	6										

DoD Officers Active Duty Personnel by Years of Service and Age for FY2007 Valuation

Age	Completed Years of Active Service																														Total		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29		30+	
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
19	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
20	6	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
21	33	17	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	
22	2,120	97	27	17	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,274	
23	3,950	2,423	86	38	34	26	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,561	
24	1,763	4,164	2,272	112	73	46	16	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8,467	
25	638	1,849	4,239	2,194	169	95	93	56	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,334	
26	555	694	1,912	3,831	2,004	174	106	102	90	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,471	
27	624	668	811	1,779	3,424	1,838	211	141	175	125	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,769	
28	413	629	723	892	1,765	2,856	1,551	269	202	324	162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,766	
29	287	416	611	695	836	1,498	2,462	1,472	213	227	311	166	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,225	
30	192	305	444	599	723	778	1,448	2,300	1,419	242	295	388	187	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,322	
31	168	268	304	425	607	658	731	1,333	2,098	1,308	310	374	395	191	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,170	
32	128	160	237	311	448	594	600	688	1,279	1,993	1,288	343	370	485	244	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,171	
33	113	128	182	259	351	423	570	570	675	1,264	1,826	1,223	369	441	524	270	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,183	
34	93	106	142	200	233	374	392	523	602	702	1,157	1,765	1,264	420	528	606	258	1	0	0	0	0	0	0	0	0	0	0	0	0	0	9,366	
35	74	82	122	157	171	258	308	363	524	598	709	1,093	1,742	1,331	485	563	603	361	3	0	0	0	0	0	0	0	0	0	0	0	0	9,547	
36	67	67	121	116	167	236	218	291	328	498	623	766	1,171	1,871	1,305	512	564	705	437	2	0	0	0	0	0	0	0	0	0	0	0	10,065	
37	66	63	77	150	153	177	195	237	306	323	543	636	737	1,279	1,971	1,451	543	576	801	438	5	0	0	0	0	0	0	0	0	0	0	10,727	
38	51	59	68	122	130	147	166	183	226	282	312	498	565	768	1,301	1,893	1,285	460	597	759	374	5	0	0	0	0	0	0	0	0	0	10,251	
39	49	50	64	86	128	126	160	144	171	217	235	299	433	511	714	1,252	1,710	1,274	470	570	616	310	4	0	0	0	0	0	0	0	0	9,593	
40	46	36	47	74	78	101	115	116	128	178	197	214	276	386	526	692	1,257	1,677	1,345	443	476	530	259	6	1	0	0	0	0	0	9,204		
41	31	35	48	52	73	98	103	96	106	131	138	173	200	258	366	547	679	1,155	2,058	1,284	340	369	442	180	3	0	0	0	0	0	0	8,965	
42	25	31	42	62	68	65	75	95	103	107	135	126	181	188	269	422	468	653	1,452	1,946	952	284	342	412	161	2	0	0	0	0	0	8,766	
43	24	30	27	55	69	69	77	78	80	97	122	128	168	166	191	264	384	502	787	1,432	871	735	322	354	125	10	2	0	0	0	0	8,663	
44	26	20	25	34	58	54	57	63	61	63	101	64	128	113	171	225	299	398	607	840	831	1,065	752	203	229	133	2	0	0	0	0	6,622	
45	12	20	29	32	40	46	54	69	63	66	60	107	86	105	137	151	211	271	392	563	523	668	903	633	162	178	177	111	2	1	0	5,692	
46	20	21	13	17	27	31	54	42	49	55	57	70	96	77	91	138	182	178	266	403	377	434	552	749	589	153	133	108	87	3	1	5,073	
47	8	22	14	23	19	29	26	36	47	41	47	40	69	71	93	97	123	135	201	257	276	301	310	415	645	518	99	92	140	74	4	4,272	
48	8	15	8	16	15	19	23	21	28	20	31	44	49	48	58	85	94	101	156	202	171	210	245	237	403	535	400	76	92	117	41	3,568	
49	12	8	15	10	14	18	17	13	31	26	28	40	42	49	67	71	85	119	142	130	148	176	188	190	287	411	362	63	65	110	2,977		
50	8	17	14	12	13	10	17	23	16	14	23	20	39	42	41	49	52	80	63	101	93	102	119	134	149	180	213	335	284	54	101	2,418	
51	8	8	8	15	11	7	13	14	10	16	15	21	35	28	37	52	70	65	84	104	55	87	80	95	114	123	133	149	226	216	90	1,989	
52	3	8	9	6	7	8	11	10	13	14	11	10	17	23	28	40	35	67	78	74	53	59	50	74	78	107	103	95	108	205	154	1,558	
53	4	5	6	7	5	8	8	9	5	11	6	9	21	16	22	32	41	50	57	73	45	49	69	44	52	69	76	54	54	87	206	1,200	
54	6	5	1	5	7	6	4	5	6	6	13	9	12	9	16	35	27	29	44	58	37	46	35	45	38	66	52	66	51	56	199	994	
55	5	6	3	0	4	8	7	5	6	1	5	7	10	9	15	21	29	28	42	36	25	36	31	35	35	40	43	34	42	50	159	777	
56	5	5	7	1	4	3	7	2	3	6	8	5	4	4	14	16	18	31	23	27	17	23	34	24	31	30	28	37	28	23	143	611	
57	2	5	9	1	6	6	1	5	2	5	3	4	7	12	21	18	19	21	15	11	14	27	17	21	20	16	20	17	105	438	0	0	
58	4	4	2	3	5	5	2	8	1	9	10	8	3	6	3	11	10	12	15	10	16	16	22	18	16	11	12	9	9	74	349	0	
59	5	3	2	2	2	4	1	2	4	2	3	8	4	7	10	11	14	16	15	13	15	6	18	11	6	18	11	7	11	14	72	295	0
60+	3	7	1	8	5	2	5	2	8	6	7	8	7	15	7	14	26	25	27	24	14	18	18	18	16	16	25	28	22	23	24	133	546
Total	11,675	12,564	12,777	12,423	11,959	10,901	9,943	9,383	9,080	8,999	8,792	8,682	8,685	8,514	9,234	9,550	9,106	8,951	10,159	9,529	6,812	5,687	4,692	3,869	3,323	2,716	2,081	1,580	1,240	1,015	1,592	236,213	

Notes: Numbers have been adjusted to budget.  
Age is age nearest birthday as of the end of the fiscal year.

Average YAS 11.0

Average Age 35.5

DoD Enlisted Active Duty Personnel by Years of Service and Age for FY2007 Valuation

Age	Completed Years of Active Service																														Total	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29		30+
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	331	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	331
18	15,850	210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,060
19	36,918	14,067	158	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51,143
20	28,243	34,378	11,859	99	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75,580
21	19,558	28,516	29,873	12,022	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90,013
22	13,774	19,311	24,955	30,652	9,000	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	97,719
23	10,130	12,949	14,651	24,969	20,873	7,502	69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	91,143
24	7,263	9,083	9,896	15,250	16,018	16,403	6,740	52	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80,706
25	5,230	6,522	7,107	10,572	10,409	12,084	13,822	6,323	52	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72,109
26	3,772	4,618	5,237	7,550	7,292	7,999	9,701	12,684	4,934	35	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63,828
27	2,712	3,297	3,682	5,598	5,412	5,634	6,268	8,950	10,665	4,315	37	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56,577
28	2,120	2,344	2,639	4,003	4,108	4,282	4,458	5,720	7,888	9,347	3,411	16	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50,337
29	1,540	1,698	1,900	2,870	3,118	3,143	3,120	3,841	4,894	7,073	7,620	2,699	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43,523
30	1,173	1,288	1,384	2,092	2,267	2,353	2,316	2,759	3,414	4,613	6,367	6,307	2,198	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38,542
31	932	955	1,063	1,632	1,667	1,707	1,761	2,041	2,496	3,180	4,246	5,582	5,146	1,972	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34,385
32	765	717	792	1,242	1,264	1,358	1,373	1,532	1,856	2,280	2,927	3,753	4,641	5,049	1,995	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31,555
33	655	620	659	883	962	1,032	1,074	1,158	1,493	1,721	2,194	2,659	3,305	4,548	5,007	2,025	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30,002
34	552	489	518	713	805	841	812	870	1,047	1,308	1,637	1,916	2,186	2,954	4,890	5,025	1,873	12	0	0	0	0	0	0	0	0	0	0	0	0	0	28,448
35	534	472	458	602	608	639	675	713	853	1,000	1,132	1,460	1,738	2,127	3,238	4,717	4,589	2,291	13	4	0	0	0	0	0	0	0	0	0	0	0	28,043
36	400	426	433	547	591	542	527	638	755	766	1,014	1,177	1,332	1,576	2,282	3,295	4,289	5,689	2,634	15	3	0	0	0	0	0	0	0	0	0	0	28,931
37	419	262	414	494	554	502	477	534	614	725	821	1,001	1,045	1,271	1,693	2,411	3,025	4,736	6,146	2,548	11	2	0	0	0	0	0	0	0	0	0	29,705
38	312	191	188	460	453	434	426	434	472	549	654	700	761	934	1,138	1,662	1,968	2,862	4,990	5,492	1,924	7	0	0	0	0	0	0	0	0	0	27,011
39	255	180	114	210	439	358	310	330	393	410	460	552	548	673	904	1,283	1,392	1,956	3,028	4,533	3,686	1,518	12	0	0	0	0	0	0	0	0	23,546
40	242	151	94	121	221	278	283	312	324	364	384	443	434	502	626	928	1,090	1,446	2,038	2,789	3,004	2,939	1,110	4	1	0	0	0	0	0	0	20,138
41	196	165	75	108	116	179	247	274	272	287	333	377	345	389	482	674	887	1,159	1,496	2,123	1,996	2,449	2,194	777	3	1	0	0	0	0	0	17,614
42	183	90	79	89	96	105	138	272	257	297	263	308	288	318	440	517	699	938	1,301	1,557	1,311	1,710	1,845	1,732	475	4	0	0	0	0	0	15,322
43	96	74	69	88	103	88	110	140	232	207	224	240	262	284	380	423	550	717	1,066	1,303	1,115	1,201	1,295	1,536	1,096	478	9	0	0	0	0	13,966
44	44	44	51	74	63	96	73	98	147	209	212	204	203	248	279	373	447	511	768	1,151	860	900	869	1,004	803	947	365	7	0	0	11,171	
45	46	35	45	52	64	74	65	77	71	101	205	140	162	186	228	259	350	453	535	619	660	662	662	702	659	706	576	247	7	0	8,638	
46	25	31	36	41	41	57	55	52	55	74	95	166	150	154	166	194	247	284	406	551	558	486	418	523	431	443	380	378	221	3	0	6,721
47	26	20	26	20	27	46	53	52	61	68	50	77	131	124	158	154	190	235	336	396	320	331	353	362	348	288	219	227	252	176	2	5,108
48	17	26	17	25	22	32	24	44	48	47	42	49	62	105	124	130	175	202	228	288	257	266	275	242	233	211	147	166	169	276	34	3,983
49	15	21	15	12	12	21	16	31	23	35	31	58	23	50	95	92	119	154	187	238	158	166	170	189	156	146	118	83	108	184	48	2,775
50	10	16	13	13	15	7	21	17	28	17	22	28	34	32	39	75	109	110	147	163	121	101	135	127	138	109	63	71	70	91	54	1,986
51	9	13	7	8	9	18	16	20	21	21	23	18	12	28	27	41	94	91	103	129	89	70	79	84	78	86	48	46	29	65	39	1,421
52	8	7	6	9	11	7	9	12	8	16	15	17	14	18	26	34	42	80	103	120	66	78	63	57	59	41	31	38	25	46	35	1,101
53	7	3	4	12	1	4	8	10	9	12	8	16	11	19	26	20	20	47	66	97	70	48	53	31	25	32	14	30	21	41	21	786
54	5	6	6	4	8	2	6	6	7	7	5	15	13	8	13	15	21	41	63	47	37	35	35	20	28	13	20	8	19	18	552	
55	8	2	2	2	6	11	10	11	5	10	3	8	5	7	8	12	13	22	28	44	31	22	31	47	23	19	13	16	8	10	11	448
56	0	0	1	1	5	5	8	7	4	2	1	7	5	6	8	8	16	25	15	20	26	20	20	28	24	18	9	4	4	8	10	315
57	3	2	1	2	4	3	6	7	2	6	6	2	5	4	5	12	11	22	15	21	17	23	14	20	14	17	7	3	6	5	10	275
58	4	3	2	1	2	1	5	7	3	3	1	5	2	5	6	9	10	13	14	25	24	15	12	10	15	11	5	4	2	3	4	226
59	0	3	0	2	1	1	2	3	5	1	2	2	1	6	8	5	8	13	14	22	13	9	14	11	10	7	6	6	2	0	5	182
60+	1	1	1	4	1	1	0	0	2	3	3	1	3	2	2	4	6	8	8	7	8	9	6	12	9	7	3	3	3	1	14	133
Total	155,393	143,307	118,530	123,148	86,733	67,856	55,084	50,031	43,411	39,119	34,644	30,010	25,073	23,608	24,307	24,410	22,248	24,097	25,726	24,518	16,575	13,059	9,665	7,533	4,720	3,579	2,026	1,349	895	928	306	1

Notes: Numbers have been adjusted to budget.  
Age is age nearest birthday as of the end of the fiscal year.

Average YAS

Average Age

6.5

28.0



All DOD Active Duty Personnel by Years of Service and Age for FY2007 Valuation

Age	Completed Years of Active Service																														Total		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29		30+	
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17	331	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	331	
18	15,850	210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,060	
19	36,918	14,070	158	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51,146	
20	29,249	34,383	11,859	99	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75,591	
21	19,591	28,533	29,878	12,027	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90,073	
22	15,894	19,408	24,982	30,669	9,013	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	99,993	
23	14,080	15,372	14,737	25,007	20,907	7,528	73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	97,704	
24	9,046	13,247	12,168	15,362	16,091	6,449	6,756	53	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	89,173	
25	5,868	8,371	11,346	12,766	10,578	12,159	13,915	6,379	53	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	81,443	
26	4,327	5,312	7,149	11,381	9,286	8,173	9,807	12,786	5,024	38	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73,299	
27	3,336	3,965	4,483	7,377	8,536	7,472	6,479	9,091	10,840	4,440	40	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66,376	
28	2,533	2,973	3,362	4,895	5,873	7,138	6,009	8,989	8,090	9,671	3,573	16	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60,123	
29	1,827	2,114	2,511	3,565	3,954	4,641	5,612	5,313	5,107	7,300	7,931	2,865	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52,748	
30	1,365	1,593	1,828	2,691	2,990	3,131	3,764	5,059	4,833	4,855	6,662	6,695	2,385	11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47,864	
31	1,100	1,223	1,367	2,057	2,274	2,365	2,492	3,374	4,594	4,488	4,556	5,541	2,163	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43,555	
32	893	877	1,029	1,553	1,712	1,952	1,973	2,220	3,135	4,273	4,215	4,096	5,011	5,534	2,239	13	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40,726	
33	768	748	841	1,142	1,313	1,455	1,644	1,728	2,168	2,985	4,020	3,882	3,674	4,989	5,531	2,295	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39,195	
34	645	595	660	913	1,038	1,215	1,204	1,393	1,649	2,010	2,794	3,681	3,450	3,374	5,418	5,631	2,131	13	0	0	0	0	0	0	0	0	0	0	0	0	0	37,814	
35	608	554	590	759	779	887	983	1,076	1,377	1,598	2,021	2,553	3,480	3,458	3,723	5,280	5,192	2,652	16	4	0	0	0	0	0	0	0	0	0	0	0	37,590	
36	467	493	554	663	758	778	745	929	1,083	1,264	1,637	1,943	2,503	3,447	3,587	3,807	4,853	6,394	3,071	17	3	0	0	0	0	0	0	0	0	0	0	0	38,996
37	485	325	491	644	707	679	672	771	920	1,048	1,364	1,637	1,782	2,550	3,664	3,862	3,568	5,312	6,947	2,986	16	2	0	0	0	0	0	0	0	0	0	0	40,432
38	363	250	256	582	583	581	592	617	698	831	966	1,198	1,326	1,702	2,439	3,555	3,253	3,322	5,587	6,251	2,298	12	0	0	0	0	0	0	0	0	0	0	37,262
39	304	230	178	296	567	484	470	474	564	629	695	851	981	1,184	1,618	2,535	3,102	3,230	3,498	5,103	4,302	1,628	16	0	0	0	0	0	0	0	0	33,139	
40	288	187	141	195	299	379	388	428	452	542	591	657	710	888	1,152	1,620	2,347	3,123	3,383	3,232	3,480	1,369	10	2	0	0	0	0	0	0	0	29,342	
41	227	200	123	160	189	277	350	370	378	418	471	550	545	647	858	1,221	1,566	2,314	3,554	3,407	2,338	2,818	2,636	957	6	1	0	0	0	0	0	26,579	
42	218	121	121	151	164	170	213	367	360	404	398	434	469	566	728	939	1,167	1,391	2,753	3,593	2,463	1,994	2,187	2,144	636	6	0	0	0	0	0	24,228	
43	120	104	96	143	172	157	187	216	312	304	346	368	430	450	571	707	944	1,219	1,853	2,735	2,479	2,072	1,530	1,858	1,450	603	19	2	0	0	0	21,449	
44	70	65	76	108	141	150	130	161	208	282	313	288	331	361	450	598	746	908	1,375	1,691	1,691	1,985	1,621	1,207	1,132	1,177	498	9	0	0	0	16,093	
45	58	55	74	84	104	120	119	146	134	167	265	247	248	291	365	410	561	724	927	1,362	1,183	1,300	1,565	1,335	841	684	753	358	9	1	0	14,330	
46	45	52	49	58	68	88	109	94	104	129	152	236	246	231	257	332	429	462	672	954	935	920	970	1,272	1,020	596	513	486	308	6	1	11,794	
47	34	42	40	43	46	75	79	88	108	109	97	117	200	195	251	251	313	370	537	653	596	632	663	777	993	786	318	319	392	250	6	9,390	
48	25	41	25	41	37	51	47	65	76	67	73	93	111	153	182	215	269	303	394	480	428	476	520	479	636	746	547	242	261	393	75	7,551	
49	27	29	30	22	26	39	33	44	54	61	59	98	63	92	144	159	190	239	306	380	288	314	346	377	346	433	529	445	171	249	159	5,752	
50	18	33	27	25	28	17	38	40	44	31	45	48	73	74	80	124	161	190	210	264	214	203	254	261	287	289	276	406	354	145	155	4,414	
51	17	21	15	23	20	25	29	34	31	37	38	39	47	56	64	93	164	156	187	233	144	157	159	179	192	209	181	195	255	281	129	3,410	
52	11	15	15	15	18	15	20	22	21	30	26	27	31	41	54	74	77	147	181	194	119	137	113	131	133	148	134	133	133	251	189	2,659	
53	11	8	10	19	6	12	16	19	14	23	14	25	32	35	48	52	61	97	123	170	115	97	122	75	77	101	90	84	75	128	227	1,986	
54	11	11	7	9	15	8	10	11	13	13	18	24	25	17	29	50	48	50	85	121	84	83	70	80	58	94	65	86	59	75	217	1,546	
55	13	8	5	2	10	19	17	16	11	11	8	15	15	16	23	33	42	50	70	80	56	58	62	82	58	59	56	50	50	60	170	1,225	
56	5	5	8	2	9	8	15	9	7	8	9	12	9	10	22	24	34	56	38	47	43	43	54	52	55	48	37	41	32	31	153	926	
57	5	7	10	3	10	9	12	8	7	8	8	7	8	8	12	24	32	40	34	42	32	34	28	47	31	38	27	19	26	22	115	713	
58	8	7	4	4	7	6	7	15	4	12	11	13	5	11	9	20	20	25	29	40	34	31	28	32	33	27	16	16	11	12	78	575	
59	5	6	2	4	3	5	3	5	7	5	4	5	9	10	9	15	19	27	30	37	26	24	20	17	28	18	17	13	13	14	77		

Notes: Numbers have been adjusted to budget.  
Age is age nearest birthday as of the end of the fiscal year.

Average YAS

Average Age

29.3

7.3

All DOD Selected Reserve Officer Personnel for FY2007 Valuation

Age	Completed Years Of Active Duty Service																				Total	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		20+
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
19	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
20	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36	
21	100	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	103	
22	260	8	11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	281	
23	517	45	19	8	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	593	
24	878	157	50	25	7	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	1,125	
25	936	255	132	19	28	11	16	1	3	0	0	0	0	0	0	0	0	0	0	0	1,401	
26	920	336	190	109	51	29	16	10	2	4	0	0	0	0	0	0	0	0	0	0	1,667	
27	795	334	262	159	200	83	33	24	21	3	2	0	0	0	0	0	0	0	0	0	1,916	
28	693	317	261	234	297	175	63	45	31	21	3	3	0	0	0	0	0	0	0	0	2,143	
29	603	282	279	208	318	234	155	64	44	32	3	1	2	0	0	0	0	0	0	0	2,225	
30	590	280	218	199	320	261	220	110	58	20	18	9	0	0	0	0	0	0	0	0	2,303	
31	520	270	230	219	322	219	225	185	90	41	16	9	10	1	1	0	0	0	0	0	2,358	
32	590	286	241	210	329	249	226	181	134	90	29	24	11	1	0	1	0	0	0	0	2,602	
33	665	288	271	232	325	294	224	196	178	181	69	26	13	12	4	1	0	0	0	0	2,979	
34	586	342	281	242	322	242	247	210	163	201	159	82	37	14	7	2	1	1	0	0	3,139	
35	700	363	309	237	328	277	256	218	163	170	170	116	48	22	17	4	3	2	2	0	3,405	
36	778	420	401	301	340	270	310	266	196	219	181	150	108	34	18	14	6	0	1	0	4,013	
37	861	531	498	366	414	359	301	285	242	226	213	163	121	84	34	12	6	9	1	0	4,716	
38	859	579	494	376	400	329	292	296	232	257	222	210	163	136	55	28	10	9	3	1	4,952	
39	770	569	536	405	396	294	266	251	217	214	244	234	211	131	78	41	16	9	3	3	4,891	
40	749	510	478	412	434	365	279	225	220	266	276	296	207	142	112	38	17	10	7	2	5,051	
41	700	479	492	420	445	375	297	239	250	257	300	316	294	192	121	63	23	15	7	4	5,294	
42	650	490	420	402	415	375	308	271	229	240	265	263	266	166	124	87	47	17	7	6	5,050	
43	605	450	437	411	386	357	346	288	249	225	250	281	225	169	130	101	69	27	23	9	13	5,051
44	538	500	370	379	404	357	348	295	262	261	211	222	226	202	144	114	67	50	18	14	12	4,994
45	465	379	321	338	324	322	296	265	242	238	220	225	216	173	118	85	60	29	23	9	24	4,372
46	484	356	274	296	307	281	286	252	222	210	228	250	218	148	126	94	53	35	22	8	20	4,170
47	394	309	239	232	243	241	258	252	192	199	230	197	185	165	103	80	68	44	23	7	14	3,675
48	271	280	190	208	242	233	227	221	192	166	158	169	166	160	99	73	54	48	18	8	22	3,206
49	311	226	160	175	206	192	217	174	180	163	145	141	145	138	106	76	48	35	14	6	21	2,879
50	273	227	184	171	178	195	214	158	146	140	123	127	144	118	89	66	42	39	11	9	20	2,674
51	252	193	171	152	195	177	177	163	138	113	88	112	99	95	79	63	41	33	9	3	10	2,363
52	229	251	131	148	138	157	142	134	107	111	82	64	79	95	74	45	49	29	17	7	11	2,100
53	187	213	148	124	145	133	124	96	79	76	65	55	59	62	61	44	22	20	17	9	15	1,754
54	203	213	165	118	108	117	121	99	76	56	55	53	46	48	39	26	30	19	5	4	10	1,611
55	145	191	124	132	117	120	119	64	75	57	51	43	30	35	30	23	19	19	7	1	13	1,415
56	131	182	133	100	108	106	74	67	52	45	38	34	38	24	19	27	11	10	6	3	5	1,213
57	123	135	159	111	117	87	55	73	48	28	41	29	15	20	22	11	19	7	5	2	5	1,112
58	95	132	126	126	88	86	44	46	44	36	32	20	22	21	13	14	7	10	4	5	5	1,016
59	103	151	121	103	84	103	74	52	55	31	16	24	17	17	7	11	5	5	3	1	7	990
60	63	97	96	80	79	69	64	36	32	18	14	12	13	11	9	12	4	6	2	0	4	721
61	22	32	43	23	32	15	14	9	6	2	5	4	6	3	4	1	1	2	1	2	2	229
62	15	20	8	7	4	12	6	3	1	1	2	1	2	1	0	0	0	0	0	0	82	
63+	14	38	25	11	9	10	4	4	6	5	5	3	2	1	2	0	2	0	0	0	141	
Total	19,681	11,719	9,698	8,220	9,207	7,814	6,991	5,828	4,877	4,623	4,228	3,969	3,443	2,640	1,845	1,257	801	540	259	123	250	108,013

Note: Numbers have been adjusted to budget.  
Age is age nearest birthday as of the end of the fiscal year.

Average Years of Active Service

Average Age

5.0

40.9

All DOD Selected Reserve Enlisted Personnel for FY2007 Valuation

Age	Completed Years Of Active Duty Service																				Total
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	2,132	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	16,189	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	27,938	261	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	30,248	1,229	62	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	28,266	3,486	418	111	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	25,051	6,669	1,255	603	391	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	21,792	9,049	2,281	1,507	1,554	205	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	18,081	3,356	2,441	2,844	695	141	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	14,552	8,540	3,838	2,718	3,761	1,186	508	90	21	0	0	0	0	0	0	0	0	0	0	0	0
26	11,470	6,662	3,401	2,653	3,793	1,487	972	261	88	29	0	0	0	0	0	0	0	0	0	0	0
27	9,151	5,055	2,744	2,324	3,321	1,413	1,096	470	264	38	30	0	0	0	0	0	0	0	0	0	0
28	7,401	4,065	2,393	1,922	2,980	1,358	1,068	571	480	128	36	11	0	0	0	0	0	0	0	0	0
29	6,067	3,180	2,086	1,629	2,571	1,196	939	583	554	282	99	15	8	0	0	0	0	0	0	0	0
30	5,022	2,693	1,804	1,487	2,203	1,213	893	579	549	335	171	39	12	11	0	0	0	0	0	0	0
31	4,543	2,400	1,571	1,325	2,039	1,101	809	552	504	393	222	84	39	11	5	0	0	0	0	0	0
32	3,963	2,021	1,508	1,148	1,739	989	769	578	526	386	258	148	68	30	11	8	0	0	0	0	0
33	3,771	1,926	1,411	1,137	1,596	970	754	506	499	428	252	159	120	67	14	12	5	0	0	0	0
34	3,575	1,795	1,387	1,065	1,525	902	723	503	439	302	186	146	146	86	37	14	11	6	0	0	0
35	3,784	1,889	1,591	1,197	1,452	899	765	604	487	466	357	218	167	112	52	43	16	4	1	0	0
36	3,755	2,007	1,697	1,284	1,674	1,014	861	665	594	483	450	325	200	114	89	58	31	6	4	4	0
37	3,857	2,131	1,777	1,489	1,856	1,176	914	700	651	545	518	370	247	145	117	59	42	13	1	5	2
38	3,541	2,032	1,610	1,492	1,847	1,215	954	669	675	527	515	370	282	161	118	79	50	20	14	4	8
39	3,243	1,845	1,544	1,356	1,753	1,189	954	806	663	498	528	363	268	191	134	94	42	33	11	7	8
40	2,889	1,619	1,400	1,279	1,581	1,161	947	711	640	495	529	367	270	163	124	90	58	32	25	7	14
41	2,653	1,551	1,304	1,204	1,451	1,118	948	743	618	502	478	379	250	183	167	99	55	44	13	10	9
42	2,405	1,373	1,250	1,229	1,386	1,090	850	715	611	484	492	355	250	179	150	120	70	44	24	8	17
43	2,127	1,257	1,197	1,187	1,312	1,031	853	644	590	508	525	431	310	211	170	145	93	57	30	14	37
44	1,805	1,244	1,067	1,095	1,188	1,039	812	614	575	480	503	398	330	228	179	150	103	52	28	19	33
45	1,582	1,146	1,054	986	1,110	952	759	616	450	461	491	404	330	248	170	135	82	60	27	13	38
46	1,412	1,004	886	955	981	770	704	505	391	412	313	313	278	282	182	126	84	56	30	10	26
47	1,190	853	785	826	900	771	647	506	364	337	339	288	270	238	208	147	80	55	21	9	27
48	921	685	658	697	693	674	575	420	349	287	244	250	194	180	141	130	94	62	32	15	27
49	762	651	592	627	649	617	502	375	294	242	223	183	161	132	126	98	73	52	27	10	21
50	652	569	554	581	588	558	483	335	257	200	171	170	148	102	103	86	61	54	18	12	19
51	569	501	472	534	549	494	448	332	208	173	160	138	112	76	76	66	56	30	12	11	24
52	434	456	461	487	492	459	392	258	197	170	173	129	87	76	70	53	39	38	15	13	14
53	385	354	387	404	411	375	329	239	181	155	105	102	103	58	49	40	27	24	13	13	10
54	319	332	394	415	365	362	298	186	164	120	98	83	68	62	39	30	19	23	11	2	8
55	329	347	425	426	320	316	245	174	139	118	80	65	54	43	22	21	23	17	7	4	11
56	224	295	387	364	318	267	198	172	113	97	67	58	43	31	33	14	11	14	5	5	11
57	214	296	393	359	285	250	168	126	99	61	43	34	35	33	16	19	11	10	3	0	6
58	169	244	336	336	303	262	186	117	96	55	46	48	31	23	25	16	13	5	6	3	6
59	117	193	269	311	303	258	181	123	74	64	41	31	25	23	20	14	10	5	6	4	13
60	86	105	190	210	169	144	115	62	46	41	29	15	15	7	6	5	4	9	0	1	6
61	19	8	19	20	8	8	6	4	0	2	3	1	1	0	2	0	1	0	1	0	1
62	2	2	4	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63+	1	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4
Total	278,658	93,296	52,223	43,428	54,269	31,191	23,778	16,264	13,514	10,442	8,952	6,530	4,922	3,512	2,655	1,971	1,264	825	385	203	396

Note: Numbers have been adjusted to budget.  
Age is age nearest birthday as of the end of the fiscal year.

Average Age

Average Years of Active Service

2.4

All DOD Selected Reserve Personnel for FY2007 Valuation

Age	Completed Years Of Active Duty Service																				Total
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	2,132	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	16,190	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	27,839	261	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	30,284	1,229	62	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	28,366	3,489	418	111	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	25,311	6,677	1,266	605	391	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	22,309	9,094	2,301	1,515	1,566	205	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	18,959	8,433	3,406	2,466	2,851	698	146	39	0	0	0	0	0	0	0	0	0	0	0	0	0
25	15,488	8,795	3,970	2,737	3,789	1,197	524	91	24	0	0	0	0	0	0	0	0	0	0	0	0
26	12,390	6,998	3,591	2,762	3,844	1,516	988	271	90	33	0	0	0	0	0	0	0	0	0	0	0
27	9,946	5,389	3,006	2,483	3,521	1,496	1,129	494	285	41	32	0	0	0	0	0	0	0	0	0	0
28	8,094	4,362	2,654	2,156	3,277	1,533	1,131	616	511	149	39	14	0	0	0	0	0	0	0	0	0
29	6,670	3,462	2,365	1,837	2,889	1,430	1,094	647	598	314	102	16	10	0	0	0	0	0	0	0	0
30	5,612	2,973	2,022	1,686	2,523	1,474	1,113	669	607	355	189	48	12	11	0	0	0	0	0	0	0
31	5,063	2,670	1,801	1,544	2,361	1,320	1,034	737	594	434	238	93	49	12	6	0	0	0	0	0	0
32	4,553	2,307	1,749	1,358	2,068	1,238	995	759	680	476	287	172	79	31	11	9	0	0	0	0	0
33	4,436	2,214	1,682	1,369	1,921	1,264	978	702	677	609	321	185	133	79	18	13	5	0	0	0	0
34	4,161	2,137	1,668	1,307	1,847	1,144	970	764	666	640	461	268	183	100	44	16	12	7	0	0	0
35	4,484	2,252	1,900	1,434	1,780	1,176	1,021	822	650	636	527	334	215	134	69	47	19	6	3	0	0
36	4,533	2,427	2,098	1,585	2,014	1,284	1,171	931	790	702	631	475	308	148	107	72	37	6	5	4	0
37	4,718	2,662	2,275	1,845	2,270	1,535	1,215	1,045	893	771	731	533	368	229	151	71	48	22	2	5	2
38	4,400	2,611	2,104	1,868	2,247	1,544	1,246	965	907	784	737	580	445	303	173	107	50	29	17	5	9
39	4,013	2,414	2,080	1,761	2,149	1,483	1,220	1,057	880	712	772	597	479	322	212	135	58	42	14	10	11
40	3,638	2,129	1,878	1,681	2,015	1,526	1,226	936	860	761	805	663	477	305	236	128	75	42	32	9	20
41	3,353	2,030	1,796	1,624	1,896	1,493	1,245	982	868	759	778	695	544	375	288	162	78	59	20	14	14
42	3,055	1,863	1,670	1,631	1,801	1,465	1,158	986	840	724	757	618	516	343	274	207	117	61	31	14	19
43	2,732	1,707	1,634	1,598	1,732	1,388	1,199	932	839	733	775	712	535	380	300	246	162	84	53	23	50
44	2,343	1,744	1,437	1,474	1,592	1,396	1,160	909	837	741	714	620	556	430	323	264	170	102	46	33	45
45	2,047	1,525	1,375	1,324	1,434	1,274	1,055	881	692	699	711	629	546	421	288	220	142	89	50	22	62
46	1,896	1,360	1,160	1,251	1,288	1,051	990	757	613	622	602	563	496	430	308	220	137	91	52	18	46
47	1,584	1,162	1,024	1,058	1,143	1,012	905	758	556	536	569	485	455	403	311	227	148	99	44	16	41
48	1,192	965	848	905	935	907	802	641	541	453	402	419	360	340	240	203	148	111	50	23	49
49	1,073	877	752	802	855	809	719	549	474	405	368	324	306	270	232	174	121	87	41	16	42
50	925	796	738	752	766	753	697	493	403	340	294	297	292	220	192	152	103	93	29	21	39
51	821	694	643	686	744	671	625	495	346	286	248	250	211	171	155	129	97	63	21	14	34
52	663	707	592	635	630	616	534	392	304	281	255	193	166	171	144	98	88	67	32	20	25
53	572	567	535	528	556	508	453	335	260	231	170	157	162	120	110	84	49	44	30	22	25
54	522	545	559	533	473	479	419	285	240	176	153	136	114	110	78	56	49	42	16	6	18
55	474	538	549	558	437	436	364	238	214	175	131	108	84	78	52	44	42	36	14	5	24
56	355	477	520	464	426	373	272	239	165	142	105	92	81	55	52	41	22	24	11	8	16
57	337	441	552	470	402	337	223	199	147	89	84	63	50	53	38	30	30	17	8	2	11
58	264	376	462	462	391	348	270	163	140	91	78	68	53	44	38	30	20	15	10	8	11
59	220	344	390	414	387	361	255	175	129	95	57	55	42	40	27	25	15	10	9	5	20
60	149	202	286	290	248	213	179	98	78	59	43	27	28	18	15	17	8	15	2	1	10
61	41	40	62	43	40	23	20	13	6	4	8	5	7	3	6	1	2	2	2	2	3
62	17	22	12	8	7	12	6	3	1	1	2	1	0	0	0	0	0	0	0	0	94
63+	15	38	26	12	9	10	4	4	6	6	5	3	2	1	2	0	2	0	0	0	0
Total	298,339	105,015	61,921	51,648	63,476	39,005	30,769	22,092	18,391	15,065	13,180	10,499	8,365	6,152	4,500	3,228	2,065	1,365	644	326	646

Note: Numbers have been adjusted to budget.  
Age is age nearest birthday as of the end of the fiscal year.

Average Years of Active Service

Average Age

32.5

2.7

**All DOD Non-Selected Reserve With 20 Good Years Officer Personnel for FY2007 Valuation**

Age	Completed Years Of Active Duty Service																				Total	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		20+
36	0	0	0	0	0	0	0	1	0	2	3	1	1	0	0	0	0	0	0	0	0	8
37	0	1	0	0	0	0	0	0	0	4	5	3	1	1	0	0	0	0	0	0	0	15
38	1	4	1	1	1	0	3	3	1	4	11	11	3	5	0	1	1	0	0	0	1	52
39	1	16	14	12	8	7	1	2	5	9	7	6	13	7	2	0	1	0	0	0	1	112
40	3	26	23	22	10	13	13	7	9	8	5	7	5	6	4	2	4	0	0	1	0	168
41	4	27	49	22	24	26	11	10	14	8	17	13	16	11	7	2	4	1	0	0	0	266
42	1	41	52	35	46	24	37	14	22	29	21	18	24	11	14	10	7	3	4	0	3	416
43	8	81	64	47	65	67	39	39	38	45	43	36	37	24	38	19	10	5	2	1	2	710
44	9	83	85	74	72	85	81	74	73	71	61	61	49	44	42	27	17	5	4	4	3	1,024
45	12	73	80	57	98	99	109	118	129	85	73	72	63	39	74	30	24	14	5	1	4	1,259
46	10	98	61	60	85	132	113	134	167	129	98	95	99	58	68	47	21	18	2	4	5	1,504
47	20	99	69	69	117	175	149	161	198	154	130	119	113	75	63	39	23	14	5	3	4	1,799
48	35	99	72	75	139	184	179	201	230	195	163	145	91	74	53	48	30	16	11	3	3	2,046
49	33	115	71	77	173	213	189	217	258	181	166	153	136	101	72	53	33	19	12	5	11	2,288
50	38	134	68	90	203	255	227	259	238	185	176	189	162	119	74	69	53	25	9	9	6	2,588
51	26	128	100	133	228	296	249	329	279	224	219	221	188	133	111	73	50	20	8	7	6	3,028
52	42	141	110	137	246	309	260	312	285	224	240	275	189	169	146	89	59	35	13	13	5	3,299
53	62	174	129	136	253	337	305	299	309	243	221	237	198	155	144	93	41	34	13	6	6	3,395
54	55	183	143	176	274	373	344	338	278	225	254	238	245	172	136	83	46	31	19	4	2	3,619
55	76	286	216	221	369	433	416	347	295	241	209	209	226	168	123	102	50	30	19	11	4	4,051
56	88	354	251	273	398	444	386	346	255	235	236	212	215	164	101	68	60	33	13	5	1	4,138
57	79	514	309	353	512	490	439	371	302	273	251	183	159	142	92	96	58	29	9	12	4	4,677
58	98	716	460	516	599	556	450	428	348	277	232	206	197	124	105	103	54	45	20	4	6	5,544
59	122	879	593	673	828	645	530	491	396	296	278	244	193	158	91	78	54	32	19	6	4	6,610
60	57	461	339	445	481	366	284	241	189	145	140	122	96	69	74	50	39	17	4	1	0	3,620
61	3	1	16	17	26	19	12	7	4	4	4	4	0	1	1	0	0	1	0	0	0	120
62	3	5	5	16	12	5	4	5	1	1	0	3	5	0	1	3	1	1	0	0	0	71
63+	6	11	20	28	53	26	24	9	9	7	2	6	0	0	0	2	4	7	2	0	0	216
Total	892	4,750	3,400	3,765	5,320	5,579	4,854	4,763	4,332	3,504	3,265	3,089	2,724	2,030	1,636	1,187	744	435	193	100	81	56,643

Note: Age is age nearest birthday as of the end of the fiscal year.

Average Age      53.7      Average Years of Active Service      6.9

# **All DOD Non-Selected Reserve With 20 Good Years Enlisted Personnel for FY2007 Valuation**

Age	Completed Years Of Active Duty Service																				Total
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
36	0	0	1	1	1	1	1	0	1	2	4	1	0	0	1	0	0	0	0	0	1
37	1	6	3	3	2	0	2	1	2	4	2	3	3	3	0	0	0	0	1	0	0
38	2	26	20	19	7	12	7	5	5	4	8	1	5	2	4	0	0	0	0	0	1
39	4	96	76	41	41	44	35	29	17	24	21	23	15	16	13	7	1	0	3	0	1
40	22	142	125	111	102	100	73	31	47	49	59	43	26	34	24	16	13	2	1	2	1
41	19	233	197	163	178	158	138	113	89	72	83	68	45	39	25	28	19	12	2	1	3
42	24	300	243	205	267	220	172	120	117	132	144	96	67	66	40	40	32	16	0	0	4
43	30	418	264	241	373	358	240	168	168	169	206	146	108	94	68	52	50	17	4	3	3
44	27	462	291	286	463	369	283	218	262	223	253	231	160	136	83	69	48	15	4	0	3
45	31	564	329	299	551	530	372	284	283	244	305	234	205	145	113	82	69	19	8	2	1
46	39	599	341	356	610	586	434	279	338	299	326	274	221	234	167	105	66	24	2	2	5
47	52	640	340	381	718	648	458	322	397	326	317	241	241	254	199	128	78	29	21	0	5
48	42	701	366	471	852	688	501	371	331	302	325	253	194	215	194	139	82	45	28	0	5
49	63	727	338	527	902	692	562	362	357	333	300	258	173	188	182	153	78	69	14	6	9
50	100	781	423	544	1,136	814	519	387	342	306	342	257	198	188	196	133	97	69	17	6	6
51	111	943	454	653	1,223	813	568	452	323	290	253	218	199	191	144	111	103	74	27	14	6
52	134	876	513	753	1,155	844	587	450	340	290	286	213	207	156	106	87	60	61	24	10	4
53	150	932	505	813	1,196	790	536	442	391	308	267	211	198	101	106	69	74	36	20	11	14
54	163	1,005	600	833	1,201	796	554	452	478	376	293	156	196	128	102	82	60	41	15	5	2
55	198	1,689	1,020	1,174	1,372	760	635	424	546	387	311	210	173	136	90	72	62	51	18	18	4
56	223	1,847	1,149	1,278	1,419	806	618	466	532	417	393	222	168	134	79	45	35	24	12	12	7
57	215	2,009	1,801	1,462	1,632	925	533	403	461	345	308	237	195	116	90	67	39	30	21	2	13
58	207	1,999	2,168	1,886	1,973	1,112	650	436	474	413	342	226	175	124	71	52	28	19	12	3	6
59	229	1,861	2,373	2,048	2,497	1,199	720	414	476	367	356	249	229	123	109	60	44	19	9	12	4
60	134	1,024	1,332	1,184	1,438	773	392	223	270	211	189	103	103	70	38	36	21	26	7	5	9
61	6	21	63	35	85	41	15	14	6	3	3	3	5	2	2	0	0	0	2	0	0
62	2	11	28	28	37	20	8	8	3	3	2	0	0	0	0	2	0	2	0	0	0
63+	24	30	89	83	97	46	21	13	16	19	21	16	5	3	5	3	3	5	0	0	0
Total	2,252	19,942	15,452	15,878	21,528	14,145	9,634	6,887	7,072	5,918	5,719	4,193	3,514	2,898	2,251	1,638	1,162	705	272	114	117

Note: Age is age nearest birthday as of the end of the fiscal year.

Average Years of Active Service 5.3

Average Age 52.7

# **All DOD Non-Selected Reserve With 20 Good Years Personnel for FY2007 Valuation**

Age	Completed Years Of Active Duty Service																				Total
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
36	0	0	1	1	1	1	1	1	1	4	7	2	1	0	1	0	0	0	0	0	1
37	1	7	3	3	2	0	2	1	2	8	7	6	4	4	0	0	0	0	1	0	0
38	3	30	21	20	8	12	10	8	6	8	19	12	8	7	4	1	1	0	0	0	2
39	5	112	90	53	49	51	36	31	22	33	28	29	28	23	15	7	2	0	3	0	2
40	25	168	148	133	112	113	86	38	56	57	64	50	31	40	28	18	17	2	1	3	1
41	23	260	246	185	202	184	149	123	103	80	100	81	61	50	32	30	23	13	2	1	3
42	25	341	295	240	313	244	209	134	139	161	165	114	91	77	54	50	39	19	4	0	7
43	38	499	328	288	438	425	279	207	206	214	249	182	145	118	106	71	60	22	6	4	5
44	36	545	376	360	535	454	364	292	335	294	314	292	209	180	125	96	65	20	8	4	6
45	43	637	409	356	649	629	481	402	412	329	378	306	268	184	187	112	93	33	13	3	5
46	49	697	402	416	695	718	547	413	505	428	424	369	320	292	235	152	87	42	4	6	10
47	72	739	409	450	835	823	607	483	595	480	447	360	354	329	262	167	101	43	26	3	9
48	77	800	438	546	991	872	680	572	561	497	488	398	285	289	247	187	112	61	39	3	8
49	96	842	409	604	1,075	905	751	579	615	514	466	411	309	289	254	206	111	88	26	11	20
50	138	915	491	634	1,339	1,069	746	646	580	491	518	446	360	307	270	202	150	94	26	15	12
51	137	1,071	554	786	1,451	1,109	817	781	602	514	472	439	387	324	255	184	153	94	35	21	12
52	176	1,017	623	890	1,401	1,153	847	762	625	514	526	488	396	325	252	176	119	96	37	23	9
53	212	1,106	634	949	1,449	1,127	841	741	700	551	488	448	396	256	250	162	115	70	33	17	20
54	218	1,188	743	1,009	1,475	1,169	898	790	756	601	547	394	441	300	238	165	106	72	34	9	4
55	274	1,975	1,236	1,395	1,741	1,193	1,051	771	841	628	520	419	399	304	213	174	112	81	37	29	8
56	311	2,201	1,400	1,551	1,817	1,250	1,004	812	787	652	629	434	383	298	180	113	95	57	25	17	8
57	294	2,523	2,110	1,815	2,144	1,415	972	774	763	618	559	420	354	258	182	163	97	59	30	14	17
58	305	2,715	2,628	2,402	2,572	1,668	1,100	864	822	690	574	432	372	248	176	155	82	64	32	7	12
59	351	2,740	2,966	2,721	3,325	1,844	1,250	905	872	663	634	493	422	281	200	138	98	51	28	18	8
60	191	1,485	1,671	1,629	1,919	1,139	676	464	459	356	329	225	199	139	112	86	60	43	11	6	9
61	9	22	79	52	111	60	27	21	10	7	7	7	5	3	3	0	0	1	2	0	0
62	5	16	33	44	49	25	12	13	4	4	2	3	5	0	1	5	1	3	0	0	0
63+	30	41	109	111	150	72	45	22	25	26	23	22	5	3	5	5	7	12	2	0	0
Total	3,144	24,692	18,852	19,643	26,848	19,724	14,488	11,650	11,404	9,422	8,984	7,282	6,238	4,928	3,887	2,825	1,906	1,140	465	214	198

Note: Age is age nearest birthday as of the end of the fiscal year.

Average Years of Active Service

Average Age

5.8

53.0

# DoD Retired Military Valuation Data as of End FY2007

All Officers

Age	Strength				Average Annual Net Retired Pay				TERA				CSB	
	Non Disabled	Perm Disabled	Temp Disabled	Reserve Retired	Total	TERA Non-Dis	TERA Res Ret	CSB Non-Dis	CSB Dis	Non-Dis	Res Ret	Dis	Non-Dis	Dis
16	0	0	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0
17	0	0	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0
18	0	0	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0
19	0	0	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0
20	0	0	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0
21	0	0	1	0	1	0	0	0	0	\$0	\$0	\$0	\$0	\$0
22	0	0	1	1	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0
23	0	0	2	0	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0
24	0	2	0	0	2	0	0	0	0	\$0	\$0	\$0	\$0	\$0
25	0	2	12	0	14	0	0	0	0	\$0	\$0	\$0	\$0	\$0
26	0	3	14	0	17	0	0	0	0	\$0	\$0	\$0	\$0	\$0
27	0	6	18	0	24	0	0	0	0	\$0	\$0	\$0	\$0	\$0
28	0	5	20	0	25	0	0	0	0	\$0	\$0	\$0	\$0	\$0
29	0	9	29	0	38	0	0	0	0	\$0	\$0	\$0	\$0	\$0
30	0	13	28	0	41	0	0	0	0	\$0	\$0	\$0	\$0	\$0
31	0	15	33	0	48	0	0	0	0	\$0	\$0	\$0	\$0	\$0
32	0	18	35	0	53	0	0	0	0	\$0	\$0	\$0	\$0	\$0
33	0	29	42	0	71	0	0	0	0	\$0	\$0	\$0	\$0	\$0
34	0	25	31	0	56	0	0	0	0	\$0	\$0	\$0	\$0	\$0
35	0	35	31	0	66	0	0	0	0	\$0	\$0	\$0	\$0	\$0
36	0	43	40	0	83	0	0	0	0	\$0	\$0	\$0	\$0	\$0
37	0	50	31	0	81	0	0	0	0	\$0	\$0	\$0	\$0	\$0
38	28	67	20	0	115	0	0	0	0	\$0	\$0	\$0	\$0	\$0
39	167	56	28	0	251	0	0	0	0	\$0	\$0	\$0	\$0	\$0
40	300	70	26	0	396	2	0	0	0	\$0	\$0	\$0	\$0	\$0
41	573	77	24	0	674	2	0	0	0	\$0	\$0	\$0	\$0	\$0
42	1,039	101	30	0	1,170	3	0	0	0	\$0	\$0	\$0	\$0	\$0
43	1,957	129	20	0	2,106	8	0	0	0	\$0	\$0	\$0	\$0	\$0
44	3,084	129	25	0	3,230	25	0	0	0	\$0	\$0	\$0	\$0	\$0
45	3,746	159	24	0	3,929	67	0	0	0	\$0	\$0	\$0	\$0	\$0
46	4,405	173	12	0	4,590	107	0	0	0	\$0	\$0	\$0	\$0	\$0
47	5,072	158	18	0	5,248	239	0	0	0	\$0	\$0	\$0	\$0	\$0
48	5,762	182	18	0	5,962	466	0	0	0	\$0	\$0	\$0	\$0	\$0
49	6,611	212	19	0	6,842	774	0	0	0	\$0	\$0	\$0	\$0	\$0
50	7,597	218	13	0	7,828	1,187	0	0	0	\$0	\$0	\$0	\$0	\$0
51	8,216	225	11	0	8,452	1,446	0	0	0	\$0	\$0	\$0	\$0	\$0
52	8,970	219	16	0	9,205	1,630	0	0	0	\$0	\$0	\$0	\$0	\$0
53	9,409	259	7	0	9,675	1,573	0	0	0	\$0	\$0	\$0	\$0	\$0
54	9,883	296	12	0	10,191	1,376	0	0	0	\$0	\$0	\$0	\$0	\$0
55	10,075	287	11	0	10,373	1,057	0	0	0	\$0	\$0	\$0	\$0	\$0
56	10,069	281	14	0	10,364	779	0	0	0	\$0	\$0	\$0	\$0	\$0
57	10,500	320	6	0	10,826	485	0	0	0	\$0	\$0	\$0	\$0	\$0
58	11,250	368	9	0	11,627	378	0	0	0	\$0	\$0	\$0	\$0	\$0
59	12,115	399	4	0	12,518	293	0	0	0	\$0	\$0	\$0	\$0	\$0
60	13,105	525	6	3,518	17,154	252	27	0	0	\$0	\$0	\$0	\$0	\$0
61	14,027	639	3	9,250	23,919	208	89	0	0	\$0	\$0	\$0	\$0	\$0
62	9,812	486	2	6,709	17,009	114	58	0	0	\$0	\$0	\$0	\$0	\$0
63	10,006	486	1	6,822	17,316	486	80	0	0	\$0	\$0	\$0	\$0	\$0
64	10,226	476	2	6,484	17,187	75	39	0	0	\$0	\$0	\$0	\$0	\$0
65	10,158	486	0	6,481	17,125	60	41	0	0	\$0	\$0	\$0	\$0	\$0
66	8,927	377	0	5,268	14,572	37	31	0	0	\$0	\$0	\$0	\$0	\$0
67	9,076	387	0	4,776	14,239	18	35	0	0	\$0	\$0	\$0	\$0	\$0
68	9,119	321	0	4,481	13,921	11	37	0	0	\$0	\$0	\$0	\$0	\$0
69	8,844	323	0	4,528	13,695	7	42	0	0	\$0	\$0	\$0	\$0	\$0
70	8,410	296	0	4,412	13,118	11	35	0	0	\$0	\$0	\$0	\$0	\$0



# DoD Retired Military Valuation Data as of End FY2007

All Officers

Age	Strength					Average Annual Net Retired Pay					TERRA					CSB				
	Non Disabled	Perm Disabled	Temp Disabled	Reserve Retired	Total	TERRA Non-Dis	TERRA Res Ret	CSB Non-Dis	CSB Dis	Non Disabled	Perm Disabled	Temp Disabled	Reserve Retired	Total	TERRA Non-Dis	TERRA Res Ret	CSB Non-Dis	CSB Dis		
71	8,056	294	0	4,222	12,572	9	19	0	0	\$43,249	\$33,612	\$0	\$17,722	\$34,451	\$30,064	\$11,573	\$0	\$0		
72	7,984	294	0	4,040	12,318	5	19	0	0	\$43,677	\$33,907	\$0	\$17,352	\$34,810	\$37,675	\$12,069	\$0	\$0		
73	8,415	284	0	4,177	12,876	7	17	0	0	\$43,630	\$34,930	\$0	\$17,271	\$35,546	\$33,687	\$10,269	\$0	\$0		
74	8,116	257	0	3,873	12,246	6	10	0	0	\$44,886	\$37,394	\$0	\$17,598	\$36,098	\$41,772	\$11,044	\$0	\$0		
75	8,261	305	0	3,979	12,545	8	7	0	0	\$45,603	\$37,553	\$0	\$17,253	\$36,415	\$37,653	\$14,676	\$0	\$0		
76	7,906	359	0	4,194	12,459	7	7	0	0	\$46,214	\$37,552	\$0	\$16,449	\$35,945	\$37,989	\$13,896	\$0	\$0		
77	7,866	347	0	4,495	12,708	2	1	0	0	\$46,882	\$36,848	\$0	\$16,049	\$35,702	\$27,684	\$22,128	\$0	\$0		
78	7,167	363	0	4,265	11,795	1	5	0	0	\$47,434	\$36,956	\$0	\$15,778	\$35,665	\$37,908	\$14,208	\$0	\$0		
79	5,883	337	0	3,804	10,024	3	1	4	0	\$48,763	\$38,785	\$0	\$15,861	\$35,861	\$31,524	\$16,268	\$0	\$0		
80	4,236	251	0	2,659	7,146	1	1	0	0	\$49,993	\$40,043	\$0	\$16,315	\$37,112	\$22,956	\$16,800	\$0	\$0		
81	3,494	245	0	2,504	6,243	2	1	0	0	\$51,011	\$40,698	\$0	\$15,915	\$36,530	\$45,840	\$22,092	\$0	\$0		
82	3,753	261	0	2,946	6,960	0	0	0	0	\$51,967	\$39,577	\$0	\$15,317	\$35,989	\$0	\$0	\$0	\$0		
83	4,241	411	0	3,636	8,288	0	0	0	0	\$52,016	\$35,229	\$0	\$15,196	\$35,030	\$0	\$0	\$0	\$0		
84	4,318	555	0	3,757	8,630	0	0	0	0	\$51,094	\$33,088	\$0	\$14,547	\$34,026	\$0	\$0	\$0	\$0		
85	4,324	652	0	3,897	8,873	0	0	0	0	\$50,098	\$31,364	\$0	\$14,359	\$33,025	\$0	\$0	\$0	\$0		
86	4,804	757	0	3,952	9,513	0	1	0	0	\$49,505	\$31,794	\$0	\$14,525	\$33,564	\$0	\$9,216	\$0	\$0		
87	4,340	822	0	3,784	8,946	0	0	0	0	\$47,917	\$31,179	\$0	\$15,234	\$32,555	\$0	\$0	\$0	\$0		
88	3,764	757	0	3,207	7,728	0	0	0	0	\$47,571	\$33,706	\$0	\$16,060	\$33,136	\$0	\$0	\$0	\$0		
89	3,081	620	0	2,714	6,415	0	0	0	0	\$47,043	\$31,447	\$0	\$16,603	\$32,658	\$0	\$0	\$0	\$0		
90	2,223	525	0	2,159	4,907	0	0	0	0	\$45,994	\$32,937	\$0	\$16,785	\$31,745	\$0	\$0	\$0	\$0		
91	1,588	348	0	1,539	3,475	0	0	0	0	\$46,421	\$32,188	\$0	\$17,360	\$32,125	\$0	\$0	\$0	\$0		
92	1,221	264	0	1,083	2,568	0	0	0	0	\$43,984	\$33,761	\$0	\$18,324	\$32,112	\$0	\$0	\$0	\$0		
93	717	160	0	803	1,680	0	0	0	0	\$45,107	\$31,470	\$0	\$19,106	\$31,380	\$0	\$0	\$0	\$0		
94	490	118	0	494	1,102	0	1	0	0	\$44,391	\$31,674	\$0	\$19,355	\$31,806	\$0	\$16,584	\$0	\$0		
95	264	80	0	327	671	0	0	0	0	\$44,519	\$34,551	\$0	\$18,736	\$30,766	\$0	\$0	\$0	\$0		
96	201	44	0	225	470	0	0	0	0	\$43,623	\$29,801	\$0	\$19,084	\$30,581	\$0	\$0	\$0	\$0		
97	119	34	0	173	326	0	0	0	0	\$45,813	\$34,864	\$0	\$17,721	\$29,763	\$0	\$0	\$0	\$0		
98	74	18	0	97	189	0	0	0	0	\$40,209	\$20,537	\$0	\$17,425	\$26,642	\$0	\$0	\$0	\$0		
99	43	10	0	64	117	0	0	0	0	\$43,281	\$21,469	\$0	\$15,892	\$26,435	\$0	\$0	\$0	\$0		
100	37	5	0	36	78	0	0	0	0	\$44,038	\$41,911	\$0	\$14,584	\$30,308	\$0	\$0	\$0	\$0		
101	14	5	0	15	34	0	0	0	0	\$47,439	\$32,810	\$0	\$16,637	\$31,699	\$0	\$0	\$0	\$0		
102	6	3	0	10	19	0	0	0	0	\$36,872	\$22,268	\$0	\$15,953	\$23,556	\$0	\$0	\$0	\$0		
103	5	1	0	3	9	0	0	0	0	\$51,742	\$9,156	\$0	\$29,384	\$39,557	\$0	\$0	\$0	\$0		
104	5	1	0	3	9	0	0	0	0	\$45,523	\$36,120	\$0	\$10,848	\$32,920	\$0	\$0	\$0	\$0		
105	2	0	0	0	2	0	0	0	0	\$55,572	\$0	\$0	\$55,572	\$0	\$0	\$0	\$0	\$0		
106	1	0	0	1	2	0	0	0	0	\$29,268	\$0	\$0	\$11,148	\$20,208	\$0	\$0	\$0	\$0		
107	1	0	0	1	2	0	0	0	0	\$35,640	\$0	\$0	\$9,756	\$22,698	\$0	\$0	\$0	\$0		
108	1	0	0	0	1	0	0	0	0	\$29,544	\$0	\$0	\$0	\$29,544	\$0	\$0	\$0	\$0		
109	0	0	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
110	0	0	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Total	359,559	19,227	743	139,867	519,396	12,820	568	66	10	\$42,513	\$29,068	\$22,257	\$17,829	\$35,339	\$25,328	\$13,476	\$22,494	\$18,249		
60+	228,731	14,589	14	139,867	383,201	923	568	0	0	\$44,695	\$32,071	\$29,591	\$17,829	\$34,407	\$30,038	\$13,476	\$0	\$0		
62+	201,599	13,425	5	127,099	342,128	463	452	0	0	\$45,110	\$32,649	\$34,037	\$17,577	\$34,392	\$31,883	\$13,178	\$0	\$0		
65+	171,555	11,977	0	107,084	290,616	194	314	0	0	\$45,550	\$33,470	\$33,470	\$17,019	\$34,539	\$33,951	\$12,501	\$0	\$0		

Note: Age is retiree's current age nearest birthday at end of fiscal year.

60+ is total for ages 60 and over.

62+ is total for ages 62 and over.

65+ is total for ages 65 and over.

Includes only retirees receiving payment from DoD.

Temporary Early Retirement Act (TERA) retirees and payments are shown for informational purposes only.

Career Status Bonus (CSB) retirees and payments are shown for informational purposes only.

TERA and CSB numbers and payments are included in the appropriate categories.

Amounts do not include increased Concurrent Receipt benefits as part of NDAA 2008.

Pay amounts do not include the 12/1/07 cost of living increase of 2.3%.

DoD Retired Military Valuation Data as of End FY2007

All Enlisted

Age	Strength				Average Annual Net Retired Pay				TERRA				CSB		
	Non Disabled	Perm Disabled	Temp Disabled	Reserve Retired	Total	Non-Dis	TERRA Res Ret	CSB Non-Dis	CSB Dis	Reserve Retired	Total	Non-Dis	TERRA Res Ret	CSB Non-Dis	CSB Dis
16	0	0	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0
17	0	0	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0
18	0	0	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0
19	0	0	24	0	24	0	0	0	0	\$0	\$6,718	\$0	\$0	\$0	\$0
20	0	1	82	0	83	0	0	0	0	\$5,340	\$6,943	\$0	\$0	\$0	\$0
21	0	8	165	0	173	0	0	0	0	\$5,256	\$7,096	\$0	\$0	\$0	\$0
22	0	30	294	0	324	0	0	0	0	\$6,530	\$7,279	\$0	\$0	\$0	\$0
23	0	28	407	0	435	0	0	0	0	\$5,673	\$7,315	\$0	\$0	\$0	\$0
24	0	61	427	0	488	0	0	0	0	\$4,965	\$7,096	\$0	\$0	\$0	\$0
25	0	77	472	0	549	0	0	0	0	\$5,623	\$7,374	\$0	\$0	\$0	\$0
26	0	89	455	0	544	0	0	0	0	\$4,714	\$7,652	\$0	\$0	\$0	\$0
27	0	148	415	0	563	0	0	0	0	\$4,509	\$7,776	\$0	\$0	\$0	\$0
28	0	141	361	0	502	0	0	0	0	\$4,537	\$7,690	\$0	\$0	\$0	\$0
29	0	169	317	0	486	0	0	0	0	\$3,906	\$8,381	\$0	\$0	\$0	\$0
30	0	201	297	0	498	0	0	0	0	\$3,964	\$8,568	\$0	\$0	\$0	\$0
31	0	217	270	0	487	0	0	0	0	\$4,445	\$8,406	\$0	\$0	\$0	\$0
32	0	197	219	0	416	0	0	0	0	\$4,381	\$8,858	\$0	\$0	\$0	\$0
33	0	260	227	0	487	0	0	0	0	\$3,608	\$9,068	\$0	\$0	\$0	\$0
34	0	271	147	0	418	0	0	0	0	\$4,316	\$9,409	\$0	\$0	\$0	\$0
35	0	312	209	0	521	0	0	0	10	\$4,003	\$9,291	\$0	\$0	\$0	\$13,527
36	2	365	161	0	528	14	0	0	14	\$4,227	\$10,035	\$0	\$0	\$0	\$14,865
37	2	450	160	0	612	12	0	0	12	\$4,307	\$10,378	\$0	\$0	\$0	\$12,300
38	653	439	126	0	1,218	237	0	0	12	\$4,519	\$10,073	\$0	\$0	\$17,184	\$12,179
39	3,597	476	133	0	4,206	556	2	0	18	\$4,757	\$9,927	\$6,546	\$0	\$13,996	\$15,286
40	7,883	527	110	0	8,520	669	16	0	19	\$5,459	\$15,987	\$14,699	\$0	\$13,300	\$14,064
41	12,163	666	101	0	12,930	9	36	0	423	\$5,984	\$11,612	\$15,720	\$0	\$13,300	\$15,830
42	16,100	796	91	0	16,987	362	158	0	5	\$6,255	\$10,967	\$16,019	\$0	\$13,294	\$14,085
43	20,648	891	94	0	21,633	393	393	0	2	\$6,627	\$13,403	\$16,295	\$0	\$13,225	\$14,563
44	24,490	986	85	0	25,561	862	862	0	3	\$7,184	\$14,633	\$16,318	\$0	\$13,382	\$9,488
45	28,277	1,088	81	0	29,446	1,696	1,696	0	2	\$7,479	\$14,306	\$16,560	\$0	\$12,963	\$14,771
46	31,575	1,122	84	0	32,781	3,025	3,025	0	0	\$7,559	\$15,846	\$16,852	\$0	\$13,427	\$0
47	33,866	1,216	69	0	35,151	4,164	4,164	0	0	\$7,463	\$15,910	\$16,848	\$0	\$13,651	\$0
48	34,366	1,244	52	0	35,662	4,812	4,812	0	46	\$7,728	\$15,906	\$16,934	\$0	\$13,392	\$0
49	34,355	1,220	51	0	35,625	5,158	5,158	0	1	\$7,963	\$15,316	\$17,114	\$0	\$13,377	\$20,484
50	34,302	1,342	52	0	35,696	5,009	5,009	0	1	\$8,324	\$18,385	\$17,185	\$0	\$13,122	\$16,403
51	33,319	1,380	35	0	34,734	4,268	4,268	0	26	\$17,618	\$16,941	\$17,262	\$0	\$12,661	\$0
52	32,731	1,469	31	0	34,231	3,198	3,198	0	14	\$17,752	\$14,782	\$17,375	\$0	\$13,246	\$18,771
53	32,670	1,569	24	0	34,263	2,356	2,356	0	25	\$17,886	\$16,104	\$17,479	\$0	\$12,847	\$0
54	31,862	1,642	27	0	33,531	1,647	1,647	0	12	\$17,975	\$16,054	\$17,568	\$0	\$12,272	\$0
55	31,953	1,754	15	0	33,722	1,185	1,185	0	13	\$18,247	\$16,667	\$17,811	\$0	\$12,930	\$0
56	29,479	1,692	11	0	31,182	952	952	0	3	\$18,359	\$14,486	\$17,903	\$0	\$10,203	\$0
57	28,378	1,836	19	0	30,233	729	729	0	0	\$18,681	\$18,416	\$18,158	\$0	\$0	\$0
58	28,997	2,000	11	0	31,008	556	556	0	0	\$19,039	\$20,230	\$18,470	\$0	\$0	\$0
59	29,396	2,187	18	0	31,601	452	452	0	0	\$19,338	\$19,841	\$18,707	\$0	\$0	\$0
60	29,741	2,298	7	6,997	39,043	389	151	0	0	\$19,694	\$18,398	\$17,323	\$6,405	\$0	\$0
61	29,665	2,062	15	17,595	49,337	321	389	0	0	\$19,964	\$10,547	\$15,727	\$5,923	\$0	\$0
62	20,830	1,441	3	12,619	34,893	185	275	0	0	\$19,984	\$11,242	\$13,793	\$6,003	\$0	\$0
63	21,497	1,361	3	11,848	34,709	136	237	0	0	\$20,010	\$11,981	\$15,961	\$5,829	\$0	\$0
64	23,463	1,255	2	11,452	36,172	114	213	0	0	\$19,866	\$12,484	\$16,170	\$6,376	\$0	\$0
65	25,540	1,237	0	10,920	37,697	79	182	0	0	\$19,768	\$12,845	\$16,404	\$6,145	\$0	\$0
66	23,937	1,096	0	8,789	33,822	51	157	0	0	\$13,249	\$0	\$16,516	\$5,634	\$0	\$0
67	23,263	1,014	0	7,692	31,969	36	110	0	0	\$19,493	\$14,309	\$16,652	\$5,911	\$0	\$0
68	23,274	860	0	7,616	31,750	20	118	0	0	\$19,345	\$13,914	\$17,053	\$5,056	\$0	\$0
69	24,560	919	0	7,583	33,062	31	142	0	0	\$19,447	\$14,050	\$16,707	\$5,153	\$0	\$0
70	26,475	924	0	7,546	34,945	15	152	0	0	\$19,596	\$14,129	\$16,952	\$4,592	\$0	\$0

## All Enlisted

Note: Age is retiree's current age nearest birthday at end of fiscal year.  
60+ is total for ages 60 and over.  
62+ is total for ages 62 and over.  
65+ is total for ages 65 and over.  
Includes only retirees receiving payment from DoD.  
Temporary Early Retirement Act (TERA) retirees and payments for Career Status Bonus (CSB) retirees and payments are shown for TERA and CSB numbers and payments are included in the appropriate amounts do not include increased Concurrent Receipt benefits a Pay amounts do not include the 12/10/07 cost of living increase of

## DoD Retired Military Valuation Data as of End FY2007

All DoD

Age	Strength				-----				Average Annual Net Retired Pay				-----				-----			
	Non Disabled	Perm Disabled	Temp Disabled	Reserve Retired	TERA Non-Dis	TERA Res Ret	CSB Non-Dis	CSB Dis	Non Disabled	Perm Disabled	Temp Disabled	Reserve Retired	Total	TERA Non-Dis	TERA Res Ret	CSB Non-Dis	CSB Dis			
16	0	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
17	0	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
18	0	0	0	0	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
19	0	0	24	0	0	0	0	0	\$0	\$0	\$6,718	\$0	\$6,718	\$0	\$0	\$0	\$0			
20	0	1	82	0	83	0	0	0	\$5,340	\$6,963	\$0	\$0	\$6,943	\$0	\$0	\$0	\$0			
21	0	8	166	0	174	0	0	0	\$5,256	\$7,223	\$0	\$0	\$7,132	\$0	\$0	\$0	\$0			
22	0	30	295	0	325	0	0	0	\$6,530	\$7,380	\$0	\$0	\$7,301	\$0	\$0	\$0	\$0			
23	0	28	409	0	437	0	0	0	\$5,673	\$7,329	\$0	\$0	\$7,223	\$0	\$0	\$0	\$0			
24	0	61	429	0	490	0	0	0	\$4,965	\$7,402	\$0	\$0	\$7,099	\$0	\$0	\$0	\$0			
25	0	79	484	0	563	0	0	0	\$5,786	\$7,508	\$0	\$0	\$7,267	\$0	\$0	\$0	\$0			
26	0	92	469	0	561	0	0	0	\$5,129	\$7,753	\$0	\$0	\$7,323	\$0	\$0	\$0	\$0			
27	0	154	433	0	587	0	0	0	\$4,574	\$7,961	\$0	\$0	\$7,073	\$0	\$0	\$0	\$0			
28	0	146	381	0	527	0	0	0	\$4,757	\$8,028	\$0	\$0	\$7,122	\$0	\$0	\$0	\$0			
29	0	178	346	0	524	0	0	0	\$4,182	\$8,921	\$0	\$0	\$7,311	\$0	\$0	\$0	\$0			
30	0	214	325	0	539	0	0	0	\$4,448	\$9,164	\$0	\$0	\$7,292	\$0	\$0	\$0	\$0			
31	0	232	303	0	535	0	0	0	\$4,945	\$9,326	\$0	\$0	\$7,426	\$0	\$0	\$0	\$0			
32	0	215	254	0	469	0	0	0	\$4,936	\$9,835	\$0	\$0	\$7,589	\$0	\$0	\$0	\$0			
33	0	289	269	0	558	0	0	0	\$4,163	\$10,690	\$0	\$0	\$7,309	\$0	\$0	\$0	\$0			
34	0	296	178	0	474	0	0	0	\$4,498	\$10,565	\$0	\$0	\$6,776	\$0	\$0	\$0	\$0			
35	0	347	240	0	587	0	0	0	\$4,664	\$10,424	\$0	\$0	\$7,019	\$0	\$0	\$0	\$13,527			
36	2	408	201	0	611	0	0	15	\$19,704	\$4,930	\$11,973	\$0	\$7,296	\$0	\$0	\$0	\$14,865			
37	2	500	191	0	693	0	0	12	\$16,182	\$4,939	\$12,006	\$0	\$6,920	\$0	\$0	\$0	\$12,802			
38	681	506	146	0	1,333	0	0	13	\$16,881	\$4,962	\$11,193	\$0	\$11,733	\$0	\$0	\$17,184	\$12,179			
39	3,764	532	161	0	4,457	2	0	240	\$16,671	\$5,305	\$11,542	\$6,546	\$15,129	\$6,546	\$0	\$14,080	\$15,501			
40	8,183	597	136	0	8,916	18	0	676	\$16,393	\$6,239	\$12,890	\$0	\$15,659	\$7,673	\$0	\$13,372	\$13,474			
41	12,736	743	125	0	13,604	38	0	9	\$16,791	\$6,548	\$13,354	\$0	\$16,200	\$7,480	\$0	\$13,118	\$15,830			
42	17,139	897	121	0	18,157	161	0	5	\$16,987	\$7,515	\$16,524	\$0	\$16,804	\$8,824	\$0	\$13,349	\$14,085			
43	22,605	1,020	114	0	23,739	401	0	247	\$18,060	\$7,515	\$16,524	\$0	\$17,599	\$9,505	\$0	\$13,453	\$18,563			
44	27,574	1,115	184	0	28,791	887	0	184	\$18,484	\$7,889	\$16,262	\$0	\$18,066	\$9,840	\$0	\$13,597	\$14,597			
45	32,023	1,247	102	0	33,375	1,763	0	2	\$18,957	\$8,344	\$16,229	\$0	\$18,552	\$10,473	\$0	\$13,771	\$14,771			
46	35,980	1,295	96	0	37,371	1,132	0	0	\$19,415	\$8,618	\$17,470	\$0	\$19,036	\$10,806	\$0	\$13,969	\$0			
47	38,938	1,374	87	0	40,399	4,403	0	0	\$19,624	\$8,574	\$20,063	\$0	\$19,249	\$11,393	\$0	\$13,738	\$0			
48	40,128	1,426	70	0	41,624	5,278	0	2	\$20,034	\$8,944	\$20,875	\$0	\$19,656	\$12,253	\$0	\$13,733	\$20,580			
49	40,966	1,432	69	0	42,467	5,932	0	43	\$20,571	\$9,453	\$20,104	\$0	\$20,195	\$13,283	\$0	\$13,801	\$20,484			
50	41,899	1,560	65	0	43,524	6,196	0	1	\$21,214	\$9,657	\$20,140	\$0	\$20,799	\$14,349	\$0	\$13,122	\$16,403			
51	41,535	1,605	46	0	43,186	5,714	0	28	\$21,716	\$10,411	\$18,096	\$0	\$21,292	\$15,383	\$0	\$13,613	\$0			
52	41,701	1,688	47	0	43,436	4,828	0	1	\$22,244	\$10,616	\$21,160	\$0	\$21,791	\$16,539	\$0	\$13,246	\$18,771			
53	42,079	1,828	31	0	43,938	3,929	0	25	\$22,790	\$10,736	\$24,122	\$0	\$22,289	\$17,683	\$0	\$12,847	\$0			
54	41,745	1,938	39	0	43,722	3,023	0	13	\$23,243	\$11,692	\$21,475	\$0	\$22,729	\$18,610	\$0	\$14,136	\$0			
55	42,028	2,041	26	0	44,095	2,242	0	0	\$23,538	\$11,670	\$20,632	\$0	\$22,991	\$19,015	\$0	\$13,933	\$0			
56	39,548	1,973	25	0	41,546	1,731	0	4	\$23,954	\$11,840	\$26,189	\$0	\$23,380	\$18,771	\$0	\$14,702	\$0			
57	38,878	2,156	25	0	41,059	1,214	0	0	\$24,674	\$12,452	\$20,756	\$0	\$24,029	\$18,174	\$0	\$0	\$0			
58	40,247	2,368	20	0	42,635	934	0	0	\$25,188	\$12,487	\$31,309	\$0	\$24,485	\$18,380	\$0	\$0	\$0			
59	41,511	2,586	22	0	44,119	745	0	0	\$25,591	\$12,590	\$21,522	\$0	\$24,827	\$18,676	\$0	\$0	\$0			
60	42,846	2,823	13	10,515	56,197	641	0	0	\$26,271	\$12,976	\$20,791	\$13,251	\$23,165	\$18,755	\$7,790	\$0	\$0			
61	43,692	2,701	529	26,845	73,256	529	0	0	\$27,037	\$14,080	\$21,865	\$13,003	\$21,415	\$19,473	\$7,495	\$0	\$0			
62	30,642	1,927	5	19,328	51,902	299	0	0	\$27,182	\$14,942	\$21,429	\$13,089	\$20,478	\$20,473	\$7,352	\$0	\$0			
63	31,503	1,847	3	18,670	52,025	216	0	0	\$27,195	\$15,519	\$27,355	\$13,337	\$21,807	\$19,900	\$7,334	\$0	\$0			
64	33,689	1,731	3	17,936	53,359	189	0	0	\$26,796	\$16,270	\$32,428	\$13,078	\$21,844	\$20,946	\$7,676	\$0	\$0			
65	35,698	1,723	0	17,401	54,822	139	0	0	\$26,204	\$16,920	\$0	\$13,021	\$21,727	\$22,359	\$7,281	\$0	\$0			
66	32,864	1,473	0	14,057	48,394	89	0	0	\$25,685	\$17,055	\$0	\$12,550	\$21,607	\$22,567	\$6,406	\$0	\$0			
67	32,339	1,401	0	12,468	46,208	54	0	0	\$25,807	\$18,442	\$0	\$12,541	\$22,004	\$22,485	\$7,624	\$0	\$0			
68	32,393	1,181	0	12,097	45,671	31	0	0	\$25,815	\$18,832	\$0	\$12,981	\$22,047	\$25,125	\$7,063	\$0	\$0			
69	33,404	1,242	0	12,111	46,757	38	0	0	\$25,469	\$18,805	\$0	\$11,981	\$21,798	\$21,771	\$6,946	\$0	\$0			
70	34,885	1,220	0	11,958	48,063	26	0	0	\$25,269	\$19,313	\$0	\$11,636	\$21,740	\$25,339	\$6,126	\$0	\$0			

# DoD Retired Military Valuation Data as of End FY2007

All DoD

Age	Strength				Average Annual Net Retired Pay				TERRA			
	Non Disabled	Perm Disabled	Temp Disabled	Reserve Retired	Total	Non-Dis	TERRA Res Ret	CSB Non-Dis	CSB Dis	CSB Non-Dis	TERRA Res Ret	CSB Dis
71	34,240	1,155	0	11,400	46,795	15	145	0	0	0	\$25,372	\$19,263
72	33,906	1,153	0	10,951	46,010	8	159	0	0	0	\$25,481	\$19,041
73	32,785	1,212	0	10,308	44,305	7	95	0	0	0	\$26,259	\$19,225
74	30,640	1,212	0	8,970	40,822	8	81	0	0	0	\$26,682	\$19,179
75	30,551	1,428	0	8,982	40,961	8	25	0	0	0	\$27,109	\$19,376
76	29,349	1,582	0	9,207	40,138	7	10	0	0	0	\$27,270	\$19,313
77	29,985	1,670	0	9,317	40,972	2	2	0	0	0	\$27,161	\$18,849
78	27,232	1,653	0	8,178	37,063	1	5	0	0	0	\$27,233	\$19,484
79	21,767	1,374	0	6,944	30,085	1	4	0	0	0	\$27,762	\$20,685
80	16,938	1,088	0	4,938	22,964	1	2	0	0	0	\$27,272	\$21,323
81	13,103	844	0	4,473	18,420	2	1	0	0	0	\$27,760	\$23,096
82	11,853	758	0	4,731	17,342	0	0	0	0	0	\$29,390	\$24,107
83	11,581	868	0	5,389	17,838	0	0	0	0	0	\$31,157	\$25,649
84	10,680	957	0	5,196	16,833	0	0	0	0	0	\$31,980	\$26,178
85	9,719	995	0	5,131	15,845	0	0	0	0	0	\$32,786	\$27,177
86	9,566	1,046	0	5,119	15,731	0	1	0	0	0	\$34,237	\$28,299
87	8,175	1,038	0	4,664	13,877	0	0	0	0	0	\$34,316	\$28,710
88	7,025	937	0	3,932	11,894	0	0	0	0	0	\$34,231	\$31,339
89	5,351	773	0	3,228	9,352	0	0	0	0	0	\$35,011	\$29,541
90	3,797	614	0	2,580	6,991	0	0	0	0	0	\$35,736	\$31,363
91	2,624	415	0	1,778	4,817	0	0	0	0	0	\$35,231	\$30,361
92	1,881	309	0	1,273	3,463	0	0	0	0	0	\$34,963	\$31,415
93	1,181	191	0	926	2,298	0	0	0	0	0	\$34,568	\$29,764
94	762	130	0	568	1,460	130	1	0	0	0	\$34,529	\$30,243
95	421	91	0	379	891	0	0	0	0	0	\$34,665	\$32,418
96	297	48	0	249	594	0	0	0	0	0	\$34,769	\$28,912
97	174	40	0	188	402	0	0	0	0	0	\$36,201	\$32,041
98	109	22	0	113	244	0	0	0	0	0	\$32,256	\$20,353
99	69	11	0	70	150	0	0	0	0	0	\$32,502	\$20,756
100	55	6	0	40	101	0	0	0	0	0	\$34,746	\$37,618
101	21	5	0	19	45	0	0	0	0	0	\$37,712	\$32,810
102	18	3	0	10	31	0	0	0	0	0	\$32,598	\$22,268
103	9	1	0	4	14	0	0	0	0	0	\$35,307	\$9,156
104	8	1	0	4	13	0	0	0	0	0	\$34,167	\$36,120
105	2	1	0	0	3	0	0	0	0	0	\$55,572	\$6,072
106	1	0	0	1	2	0	0	0	0	0	\$29,268	\$0
107	1	0	0	1	2	0	0	0	0	0	\$35,640	\$0
108	1	0	0	0	1	0	0	0	0	0	\$29,544	\$0
109	0	0	0	0	0	0	0	0	0	0	\$0	\$0
110	0	0	0	0	0	0	0	0	0	0	\$0	\$0
Total	1,461,724	78,105	7,201	312,647	1,859,677	54,882	3,132	3,312	121	0	\$24,560	\$15,307
60+	769,832	42,900	44	312,647	1,125,423	2,311	3,132	0	0	0	\$27,164	\$19,943
62+	683,294	37,376	13	275,287	995,970	1,141	2,476	0	0	0	\$27,228	\$20,892
65+	587,460	31,871	0	219,353	838,684	437	1,613	0	0	0	\$27,257	\$21,815
TERRA Res Ret	\$5,580	\$6,198	\$6,193	\$5,895	\$7,478	\$12,136	\$13,218	\$14,208	\$16,204	\$11,046	\$22,092	\$0
CSB Non-Dis	\$24,602	\$21,894	\$22,009	\$24,602	\$21,894	\$24,602	\$21,894	\$24,602	\$21,894	\$24,602	\$21,894	\$21,894
CSB Dis	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Note: Age is retiree's current age nearest birthday at end of fiscal year.

60+ is total for ages 60 and over.

62+ is total for ages 62 and over.

65+ is total for ages 65 and over.

Includes only retirees receiving payment from DoD.

Temporary Early Retirement Act (TERA) retirees and payments are shown for informational purposes only.

Career Status Bonus (CSB) retirees and payments are shown for informational purposes only.

TERRA and CSB numbers and payments are included in the appropriate categories.

Amounts do not include increased Concurrent Receipt benefits as part of NDAA 2008.

Pay amounts do not include the 12/07 cost of living increase of 2.3%.

DoD Survivor Valuation Data as of End FY2007

Age	Strength				Average Annual Net Survivor Pay							
	SBP	RCSBP	Minimum Income	Death on Active Duty	RSFPP	Total	SBP	RCSBP	Minimum Income	Death on Active Duty	RSFPP	Total
0	0	0	0	0	16	16	\$0	\$0	\$0	\$5,224	\$0	\$5,224
1	1	1	0	0	67	68	\$6,588	\$0	\$0	\$6,623	\$0	\$6,622
2	2	2	0	0	90	92	\$3,197	\$0	\$0	\$6,367	\$0	\$6,298
3	3	3	0	0	163	166	\$6,967	\$0	\$0	\$6,980	\$0	\$6,972
4	13	1	0	167	0	181	\$6,980	\$2,790	\$0	\$6,370	\$0	\$6,394
5	19	0	0	187	0	206	\$7,872	\$0	\$0	\$6,183	\$0	\$6,338
6	28	0	0	189	1	218	\$5,048	\$0	\$0	\$5,747	\$15,336	\$5,701
7	42	1	0	171	0	214	\$8,557	\$3,700	\$0	\$6,538	\$0	\$6,921
8	47	1	0	171	0	219	\$5,428	\$18,468	\$0	\$6,120	\$0	\$6,028
9	58	1	0	156	0	215	\$5,867	\$3,700	\$0	\$6,064	\$0	\$6,000
10	81	0	0	136	0	217	\$6,076	\$0	\$0	\$6,429	\$0	\$6,297
11	73	4	0	127	0	204	\$6,176	\$2,804	\$0	\$6,127	\$0	\$6,079
12	103	6	0	121	0	230	\$6,568	\$5,002	\$0	\$6,694	\$0	\$6,593
13	122	8	0	111	0	241	\$6,228	\$3,103	\$0	\$6,243	\$0	\$6,131
14	120	13	0	99	0	232	\$6,431	\$3,531	\$0	\$6,823	\$0	\$6,436
15	144	18	0	87	1	250	\$7,337	\$3,658	\$0	\$6,406	\$1,389	\$6,724
16	154	16	0	72	0	242	\$8,097	\$3,355	\$0	\$6,508	\$0	\$7,310
17	192	18	0	73	0	283	\$7,676	\$4,593	\$0	\$6,796	\$0	\$7,253
18	151	17	0	42	0	210	\$4,962	\$4,962	\$0	\$7,405	\$0	\$7,606
19	122	5	0	12	0	139	\$10,238	\$7,006	\$0	\$7,674	\$0	\$9,900
20	97	9	0	17	0	123	\$10,649	\$5,291	\$0	\$8,860	\$0	\$10,010
21	111	6	0	7	0	124	\$10,086	\$4,170	\$0	\$8,867	\$0	\$9,731
22	41	4	0	2	0	47	\$11,897	\$3,605	\$0	\$4,107	\$0	\$10,860
23	23	3	0	4	0	30	\$13,955	\$2,412	\$0	\$5,289	\$0	\$11,645
24	25	6	0	2	1	34	\$11,495	\$7,262	\$0	\$6,714	\$3,122	\$10,221
25	22	2	0	2	0	26	\$9,769	\$1,728	\$0	\$390	\$0	\$8,429
26	33	3	1	5	1	43	\$9,831	\$9,712	\$7,329	\$10,200	\$1,596	\$9,616
27	19	8	0	7	0	34	\$9,405	\$3,701	\$0	\$7,114	\$0	\$7,591
28	22	3	0	11	0	36	\$10,469	\$6,280	\$0	\$4,817	\$0	\$8,393
29	37	3	0	18	1	59	\$9,501	\$2,952	\$0	\$4,914	\$9,852	\$7,774
30	23	5	0	28	1	57	\$11,441	\$2,851	\$0	\$5,783	\$2,088	\$7,744
31	26	6	0	42	2	76	\$10,664	\$4,238	\$0	\$4,764	\$1,643	\$6,659
32	29	2	0	22	0	53	\$10,073	\$3,624	\$0	\$5,547	\$0	\$7,951
33	31	7	0	43	0	81	\$10,617	\$6,619	\$0	\$5,848	\$0	\$7,740
34	42	4	0	57	4	107	\$10,275	\$9,084	\$0	\$4,952	\$1,695	\$7,074
35	39	8	0	52	7	106	\$11,218	\$7,443	\$0	\$6,701	\$1,700	\$8,089
36	49	14	0	42	5	110	\$9,375	\$4,964	\$0	\$5,550	\$3,950	\$7,106
37	71	9	0	70	6	156	\$11,147	\$4,015	\$0	\$5,592	\$1,771	\$7,882
38	66	19	0	56	6	147	\$9,915	\$3,955	\$0	\$7,855	\$2,089	\$8,040
39	72	19	0	60	1	152	\$9,121	\$4,649	\$0	\$6,130	\$1,308	\$7,330
40	95	22	0	80	7	204	\$11,976	\$5,491	\$0	\$7,109	\$1,524	\$9,009
41	108	23	0	69	17	217	\$10,876	\$5,163	\$0	\$7,574	\$4,105	\$8,690
42	144	36	0	61	5	246	\$10,573	\$5,889	\$0	\$6,405	\$4,207	\$8,724
43	187	43	0	86	11	327	\$10,154	\$5,667	\$0	\$7,083	\$2,248	\$8,490
44	190	58	0	67	6	321	\$10,471	\$5,942	\$0	\$7,755	\$1,815	\$8,924
45	222	67	0	56	14	359	\$9,475	\$6,148	\$0	\$11,644	\$3,393	\$8,955
46	318	77	0	67	22	484	\$10,288	\$5,507	\$0	\$10,188	\$3,859	\$9,221
47	359	109	0	50	28	546	\$10,293	\$5,699	\$0	\$11,622	\$2,909	\$9,119
48	379	110	0	46	15	550	\$10,114	\$4,830	\$0	\$9,770	\$3,432	\$8,847
49	440	133	0	46	16	635	\$10,018	\$5,965	\$0	\$11,497	\$2,238	\$9,080
50	519	172	0	34	29	754	\$10,436	\$5,713	\$0	\$8,974	\$4,121	\$9,050
51	545	234	0	49	24	852	\$10,482	\$6,200	\$0	\$11,354	\$2,863	\$9,141
52	653	246	0	36	17	952	\$10,660	\$5,928	\$0	\$11,936	\$4,004	\$9,367
53	776	291	0	39	20	1,126	\$10,730	\$6,126	\$0	\$10,816	\$3,755	\$9,419
54	852	266	0	39	15	1,172	\$10,612	\$6,119	\$0	\$12,711	\$3,967	\$9,577
55	930	376	0	43	13	1,362	\$10,729	\$5,746	\$0	\$12,004	\$3,320	\$9,323
56	1,017	442	0	40	6	1,505	\$10,671	\$5,630	\$0	\$8,770	\$1,529	\$9,104
57	1,183	534	1	48	8	1,774	\$10,740	\$6,141	\$7,329	\$10,906	\$3,060	\$9,323
58	1,364	580	0	42	13	1,999	\$11,091	\$5,825	\$0	\$12,195	\$3,209	\$9,535
59	1,591	762	1	30	12	2,396	\$10,834	\$6,138	\$6,502	\$10,610	\$2,861	\$9,286
60	1,854	921	0	53	6	2,834	\$11,077	\$6,191	\$0	\$11,974	\$2,228	\$9,487

DoD Survivor Valuation Data as of End FY2007

Age	Strength				Average Annual Net Survivor Pay							
	SBP	RCSBP	Minimum Income	Death on Active Duty	SBP	RCSBP	Minimum Income	Death on Active Duty				
61	2,214	1,048	2	41	7	3,312	\$11,173	\$6,244	\$4,905	\$11,277	\$2,766	\$9,593
62	1,906	839	0	33	7	2,785	\$11,134	\$6,288	\$0	\$8,182	\$4,761	\$9,623
63	2,364	1,014	1	39	12	3,430	\$11,330	\$6,360	\$5,155	\$9,739	\$1,638	\$9,807
64	2,829	1,137	0	39	10	4,015	\$11,213	\$6,350	\$0	\$7,689	\$1,251	\$9,777
65	3,288	1,322	0	53	22	4,685	\$11,192	\$6,464	\$0	\$8,841	\$2,235	\$9,789
66	3,522	1,343	0	44	17	4,926	\$11,139	\$6,365	\$0	\$7,550	\$2,100	\$9,775
67	3,712	1,407	1	51	32	5,203	\$11,276	\$6,395	\$7,329	\$7,111	\$2,166	\$9,859
68	4,309	1,514	1	53	38	5,915	\$11,578	\$6,415	\$7,329	\$7,678	\$1,558	\$10,156
69	4,693	1,658	4	48	43	6,446	\$11,764	\$6,403	\$7,148	\$7,705	\$2,210	\$10,288
70	5,292	1,729	3	53	60	7,137	\$11,744	\$6,336	\$6,854	\$10,738	\$2,085	\$10,343
71	5,573	1,822	4	75	124	7,598	\$11,856	\$6,497	\$6,697	\$9,245	\$2,131	\$10,384
72	6,280	2,079	7	56	136	8,558	\$12,033	\$6,504	\$6,204	\$9,436	\$1,914	\$10,507
73	6,617	2,138	3	71	208	9,037	\$12,000	\$6,550	\$6,901	\$10,043	\$2,194	\$10,468
74	6,944	2,071	3	84	249	8,951	\$12,361	\$6,611	\$6,141	\$10,573	\$2,068	\$10,726
75	7,025	2,309	2	78	332	9,746	\$12,659	\$6,642	\$5,784	\$10,599	\$1,968	\$10,852
76	7,206	2,525	2	74	358	10,165	\$13,206	\$6,889	\$5,327	\$10,997	\$2,437	\$11,240
77	7,218	2,485	2	70	429	10,204	\$13,302	\$7,045	\$4,587	\$11,277	\$2,512	\$11,309
78	7,188	2,610	3	52	427	10,280	\$13,288	\$6,959	\$6,337	\$11,366	\$2,325	\$11,214
79	7,337	2,793	8	48	493	10,679	\$13,746	\$7,135	\$6,439	\$14,119	\$2,512	\$11,494
80	7,426	2,865	10	47	535	10,883	\$13,914	\$7,377	\$5,716	\$11,587	\$2,473	\$11,613
81	7,753	3,188	5	49	613	11,608	\$14,634	\$7,535	\$7,792	\$12,205	\$2,682	\$12,040
82	8,015	3,310	9	56	633	12,023	\$15,116	\$7,739	\$6,398	\$13,721	\$2,888	\$12,428
83	8,295	3,608	5	53	708	12,669	\$15,533	\$8,002	\$4,131	\$12,394	\$3,057	\$12,673
84	8,341	3,760	9	48	771	12,929	\$15,991	\$7,998	\$6,512	\$12,868	\$3,135	\$12,882
85	7,720	3,667	7	34	758	12,186	\$16,382	\$8,223	\$5,440	\$9,799	\$2,992	\$13,069
86	7,230	3,701	14	36	749	11,730	\$16,565	\$8,589	\$6,595	\$13,118	\$3,304	\$13,179
87	6,041	3,216	5	34	687	9,983	\$16,987	\$8,850	\$6,431	\$13,326	\$3,208	\$13,399
88	4,841	2,709	13	14	533	8,110	\$17,111	\$8,885	\$6,562	\$10,929	\$3,360	\$13,432
89	3,617	2,162	11	15	416	6,221	\$16,961	\$9,185	\$5,525	\$14,733	\$3,226	\$13,314
90	2,845	1,755	11	9	315	4,935	\$16,973	\$9,351	\$6,338	\$11,375	\$2,717	\$13,319
91	2,177	1,323	4	7	285	3,796	\$17,540	\$9,465	\$5,769	\$14,500	\$3,042	\$13,619
92	1,616	1,071	7	5	237	2,936	\$17,169	\$9,472	\$6,215	\$13,836	\$3,292	\$13,209
93	1,217	778	4	7	168	2,174	\$16,859	\$9,768	\$6,635	\$12,595	\$2,907	\$13,210
94	936	583	5	5	143	1,672	\$16,926	\$9,445	\$5,941	\$17,275	\$2,950	\$13,090
95	654	433	7	4	118	1,216	\$18,169	\$9,602	\$7,283	\$9,210	\$3,400	\$13,593
96	450	327	5	0	90	872	\$16,723	\$9,692	\$6,238	\$0	\$2,518	\$12,560
97	277	207	3	1	66	554	\$17,292	\$8,886	\$6,596	\$6,132	\$2,803	\$12,347
98	193	165	4	2	66	430	\$16,704	\$9,390	\$8,103	\$8,970	\$3,193	\$11,707
99	141	94	3	0	41	279	\$16,948	\$8,920	\$6,437	\$0	\$2,704	\$12,037
100	63	70	3	1	25	162	\$19,186	\$9,375	\$6,059	\$17,364	\$2,629	\$12,137
101	47	31	1	0	17	96	\$18,397	\$8,631	\$7,329	\$0	\$3,831	\$12,549
102	23	26	2	0	7	58	\$13,648	\$7,847	\$7,329	\$0	\$5,027	\$9,789
103	15	15	0	0	3	33	\$16,908	\$8,558	\$0	\$0	\$2,624	\$11,814
104	8	3	0	0	3	14	\$20,613	\$10,696	\$0	\$0	\$3,208	\$14,758
105	3	5	0	0	2	10	\$12,692	\$8,694	\$0	\$0	\$2,630	\$8,621
106	3	2	2	0	1	8	\$13,399	\$5,676	\$7,143	\$0	\$724	\$8,320
107	3	0	0	0	0	3	\$10,372	\$0	\$0	\$0	\$0	\$10,372
108	0	0	0	0	1	1	\$0	\$0	\$0	\$0	\$5,292	\$5,292
109	1	0	3	0	0	4	\$30,400	\$0	\$9,185	\$0	\$0	\$14,489
Total	191,147	78,668	201	5,374	11,336	286,726	\$13,662	\$7,466	\$6,373	\$8,199	\$2,835	\$11,426
60+	176,922	73,838	198	1,542	11,001	263,501	\$13,933	\$7,572	\$6,363	\$10,650	\$2,823	\$11,662
62+	172,854	71,869	196	1,448	10,988	257,355	\$13,999	\$7,609	\$6,378	\$10,583	\$2,824	\$11,712
65+	165,755	68,879	195	1,337	10,959	247,125	\$14,118	\$7,664	\$6,384	\$10,752	\$2,825	\$11,794

Note: Age is survivor's current age nearest birthday at end of fiscal year.  
60+ is total for ages 60 and over.  
62+ is total for ages 62 and over.  
65+ is total for ages 65 and over.  
Includes only survivors receiving payment from DoD.  
Survivors receiving payment under SBP and RSFP are counted twice.  
Two-life survivors are given by the age of the adult survivor.  
Children of the same deceased member receiving separate benefit payments are counted individually.  
Amounts do not include increased survivor benefits as part of NDAA 2008.  
Pay amounts do not include the 12/1/07 cost of living increase of 2.3%.  
The liability calculated in this valuation, however, reflects the increased benefits.





## APPENDIX D

### ECONOMIC ASSUMPTIONS

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## **ECONOMIC ASSUMPTIONS**

In August, 2007, the DoD Board of Actuaries adopted the following economic assumptions for use in the valuation as of September 30, 2007: the rate of inflation (CPI) is assumed to be 3.00 percent per year; the investment return is 6.00 percent per year; and the basic pay scale increases are 3.75 percent per year. As background for determining the economic assumptions, the Board receives a number of presentations by economists and actuaries and is provided with extensive historical data on inflation, interest rates, and wage growth. The Board also considers what other federal retirement systems are assuming.

The comparisons to Civil Service and Social Security in this appendix are not meant to imply an expectation that all three systems should use exactly the same assumptions. They are different in terms of the trust funds themselves and in terms of the programs financed by the trust funds.

### **Inflation**

The CPI-W, one of the consumer price indexes published by the Bureau of Labor Statistics, was emphasized as an inflation measure since it is used in calculating military retired pay cost-of-living increases. The CPI-W measures the average price change for Urban Wage Earners and Clerical Workers and covers approximately 32 percent of the U.S population. (The CPI-W is a subset of the broader CPI-U measure which computes the average price change for All Urban Consumers and covers approximately 87 percent of the U.S. population). The CPI-W is the common index used to make cost-of-living adjustments for labor contracts.

Table D-1 shows the average annual CPI-W changes over various periods of time since 1930. Different periods experienced different rates of change. The average annual CPI change during successive 30-year periods since World War II has risen from 3.79 percent for the period ending in 1975 to 5.20 percent for the period ending in 1995. This reflects the high inflation during the 1970s. The average annual CPI change during the current 32-year period ending in 2007 is 4.04 percent.

The DoD assumption for CPI is reasonably consistent with what is used in other parts of the government. In its 2007 report, the Civil Service Retirement System (CSRS) assumes a 3.50 percent CPI increase. The Trustees of the Social Security Administration in their 2007 Annual Report made projections under three alternative sets of assumptions. Their intermediate assumption for CPI was 2.8 percent. The Board has noted that in certain respects, the effect of the CPI on the valuation is relatively minor in a system where retirement benefits are fully indexed and expressed as a percentage of payroll.

## **Interest Rate**

The Board analyzes Tables D-2 & D-3, as well as other material presented at the DoD Board of Actuaries annual meeting, when setting the interest assumption. The Board focuses on real interest rates. To simplify discussion, the real interest rate is defined as the difference between the nominal interest rate and the CPI. Other things being equal, a lower element of risk in an investment will give a lower real interest rate. Because the Military Retirement Fund must be invested in obligations of the U.S. Government, a highly secure investment, the real interest rates are expected to be relatively low.

The Board examines past real interest rates that would have been earned by the types of public debt securities in which the Fund is invested. The Board recognizes the importance of selecting a real interest rate that would prevail on average over a long period of time and that would not unduly weight recent experience or expected results during the near-term future.

Table D-2 depicts the average real yield rates on new purchases of the Fund. Because the Fund was established in 1984, the DoD Office of the Actuary compiled a Composite Series to simulate what new purchases would have yielded in the past. Particular emphasis is given to the rates since 1950.

Table D-3 shows the average real Military Retirement Fund effective yield. The effective yield calculation uses a “dollar-weighted yield,” which is computed by dividing the investment income by the average amount of principal invested throughout the year. Since the Fund’s inception, the average annual real yield is 5.57 percent.

After analyzing past trends of government trust fund earnings, 3.00 percent was adopted as the rate of real interest. Since 3.00 percent had been adopted as the inflation rate, the nominal rate of interest is 6.00 percent.

It is relevant to note the real interest rates being assumed by the other two major public benefit systems. The Trustees of the Social Security Administration used an intermediate ultimate real interest rate assumption of 2.9 percent in its 2007 report. The Board of Actuaries of the CSRS used a 2.75 percent real interest rate assumption in its 2007 valuation.

## **Wage Growth**

For the salary increase assumption, recent historical data is used as well as forecasts for the population at large. The Career Compensation Act of 1949 revamped the military compensation structure to provide an equitable pay and allowance system. Associated with this change was a large basic pay increase designed to establish rough comparability with the private sector. Additionally, the Army and Air Force Vitalization and Retirement Equalization Act of 1948 established for the first time a uniform voluntary retirement system authority among all branches of Service. The reserve retirement program was also established at this time. These

two Acts provided the start of the modern-day compensation structure designed to attract and retain the number of Service members needed. In the analysis of basic pay scale increases, the Board looked at all data from this point forward.

The Military Pay Comparability Act of 2003 ensures that military pay increases are comparable to private sector pay growth, as measured by the Employment Cost Index (ECI) – Wages and Salaries index on a 15 month lag. Covenants are embedded within the act which gives the President the authority to propose an alternate basic pay adjustment.

Table D-4 displays real military basic pay increases over various periods of time during the post-World War II era. From the early 1950s to the early 1970s, the average annual real military pay increase was approximately 1.79 percent. From the early 1950s to the present, the increase has averaged approximately 1.01 percent a year. Since the Vietnam War, annual real pay increases have averaged only 0.60 percent. (There was negative real pay growth in the late 1970s and late 1980s.)

In making its recommendation for the real rate of the annual basic pay scale increase, the Board assumed that future general pay increases in the military would not deviate much from pay increases in the private sector. In this light, the Board adopted a real basic pay growth assumption of 0.75 percent, leading to a nominal growth of 3.75 percent. The Board of Actuaries of the CSRS assumed 0.75 percent real wage growth for its 2007 valuation. The Social Security Trustees' 2007 report had an intermediate ultimate assumption for real wage growth of 1.1 percent. (For the Military Retirement System and CSRS, wage increase relates to 'across-the-board salary increase,' whereas for Social Security, wage increase generally relates to 'total wage increase.'

TABLE D-1

## AVERAGE CONSUMER PRICE INDEX (CPI-W) INCREASES

FROM PERIOD CORRESPONDING TO END OF:		1930	1935	1940	1945	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
TO END OF:																										
1935	-3.04																									
1940	-1.34	0.38																								
1945	0.81	2.79	5.25																							
1950	2.22	4.03	5.91	6.57																						
1955	2.06	3.37	4.39	3.96	1.43																					
1960	2.07	3.12	3.82	3.35	1.77	2.12																				
1965	1.96	2.82	3.32	2.84	1.63	1.73	1.33																			
1970	2.28	3.07	3.52	3.18	2.35	2.65	2.92	4.54																		
1975	2.79	3.54	4.00	3.79	3.24	3.70	4.23	5.71	6.90																	
1980	3.41	4.16	4.64	4.55	4.22	4.79	5.46	6.88	8.07	9.24																
1985	3.45	4.12	4.55	4.46	4.16	4.62	5.13	6.10	6.63	6.50	3.82															
1990	3.49	4.10	4.48	4.40	4.13	4.52	4.93	5.66	5.95	5.63	3.87	3.91														
1995	3.45	4.01	4.34	4.25	4.00	4.32	4.64	5.20	5.34	4.95	3.56	3.42	2.94													
1996	3.44	3.99	4.32	4.22	3.97	4.29	4.59	5.13	5.24	4.85	3.51	3.38	2.93													
1997	3.42	3.96	4.28	4.18	3.93	4.24	4.52	5.03	5.12	4.72	3.43	3.27	2.81	2.90												
1998	3.39	3.91	4.22	4.13	3.88	4.17	4.44	4.92	4.99	4.57	3.31	3.12	2.62	2.10	2.10											
1999	3.37	3.89	4.19	4.10	3.85	4.13	4.39	4.84	4.89	4.48	3.26	3.06	2.60	2.17	1.70	1.30										
2000	3.37	3.88	4.18	4.08	3.84	4.11	4.36	4.80	4.85	4.44	3.28	3.09	2.68	2.44	2.32	2.40	2.40									
2001	3.36	3.86	4.16	4.06	3.82	4.08	4.32	4.74	4.77	4.37	3.24	3.06	2.68	2.46	2.38	2.45	2.83	3.50		2.60						
2002	3.34	3.83	4.11	4.01	3.77	4.02	4.25	4.65	4.67	4.26	3.16	2.96	2.57	2.31	2.21	2.24	2.47	2.50	2.00	1.40						
2003	3.32	3.80	4.08	3.98	3.74	3.98	4.20	4.58	4.59	4.18	3.11	2.92	2.54	2.29	2.20	2.21	2.40	2.40	2.40	1.75	2.10					
2004	3.31	3.79	4.06	3.96	3.72	3.95	4.16	4.53	4.53	4.13	3.10	2.90	2.55	2.33	2.26	2.28	2.45	2.46	2.46	2.07	2.40	2.70				
2005	3.32	3.79	4.06	3.96	3.72	3.96	4.16	4.52	4.52	4.13	3.14	2.96	2.65	2.51	2.46	2.51	2.68	2.73	2.58	2.57	2.96	3.40	4.10			
2006	3.32	3.78	4.05	3.95	3.72	3.94	4.14	4.49	4.49	4.10	3.14	2.98	2.69	2.58	2.55	2.60	2.76	2.81	2.70	2.72	3.05	3.37	3.70	3.30		
2007	3.31	3.76	4.02	3.92	3.69	3.91	4.10	4.44	4.43	4.04	3.11	2.95	2.67	2.56	2.52	2.57	2.71	2.75	2.64	2.65	2.90	3.10	3.23	2.80	2.30	

All figures are average annual percentage increases.

Source of CPI-W indices: Bureau of Labor Statistics.

\*\*\* CPI-W SERIES: DECEMBER TO DECEMBER INCREASES FROM 1930 TO 1984;  
 ACTUAL COST-OF-LIVING ADJUSTMENTS GIVEN TO MILITARY RETIREES BEGINNING FISCAL YEAR 1985.  
 - MRF COLAS ARE CALCULATED AS THE INCREASE FROM 3RD QUARTER TO 3RD QUARTER.

TABLE D-2

## AVERAGE REAL YIELD RATES ON NEW PURCHASES\*\*\*

FROM DECEMBER 31 OF:		1930	1935	1940	1945	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
TO DECEMBER 31 OF:		1935	1940	1945	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	
1935	6.51																									
1940	4.31	2.17																								
1945	1.72	-0.59	-3.28																							
1950	0.15	-1.88	-3.85	-4.41																						
1955	0.32	-1.17	-2.25	-1.73	1.02																					
1960	0.52	-0.64	-1.33	-0.67	1.25	1.48																				
1965	0.82	-0.10	-0.55	0.15	1.71	2.06	2.64																			
1970	0.88	0.10	-0.24	0.38	1.62	1.82	1.99	1.34																		
1975	0.77	0.08	-0.22	0.30	1.27	1.34	1.29	0.62	-0.10																	
1980	0.64	0.01	-0.25	0.19	0.97	0.96	0.83	0.24	-0.30	-0.51																
1985	1.32	0.81	0.66	1.17	1.99	2.15	2.29	2.20	2.49	3.81	8.31															
1990	1.62	1.19	1.09	1.59	2.37	2.56	2.74	2.77	3.13	4.22	6.67	5.06														
1995	1.72	1.33	1.26	1.73	2.43	2.61	2.77	2.79	3.09	3.90	5.41	3.99	2.93													
1996	1.75	1.37	1.30	1.76	2.45	2.63	2.79	2.81	3.10	3.88	5.29	3.94	3.02	3.47												
1997	1.78	1.41	1.35	1.80	2.49	2.66	2.82	2.85	3.14	3.89	5.22	3.95	3.17	3.78	4.09											
1998	1.80	1.44	1.38	1.83	2.50	2.68	2.83	2.86	3.14	3.85	5.10	3.89	3.17	3.57	3.62	3.15										
1999	1.83	1.47	1.41	1.86	2.52	2.69	2.85	2.88	3.14	3.83	5.01	3.85	3.18	3.51	3.52	3.23	3.32									
2000	1.84	1.49	1.43	1.87	2.52	2.69	2.84	2.87	3.12	3.78	4.88	3.76	3.12	3.31	3.27	3.00	2.93	2.55								
2001	1.82	1.47	1.41	1.84	2.48	2.64	2.78	2.80	3.04	3.65	4.67	3.56	2.88	2.85	2.72	2.38	2.13	1.54	0.55							
2002	1.82	1.47	1.42	1.84	2.46	2.62	2.75	2.77	2.99	3.58	4.53	3.44	2.78	2.67	2.54	2.23	2.00	1.56	1.08	1.61						
2003	1.81	1.47	1.42	1.83	2.45	2.59	2.72	2.74	2.95	3.50	4.40	3.33	2.68	2.52	2.39	2.11	1.90	1.55	1.22	1.55	1.50					
2004	1.81	1.47	1.42	1.83	2.43	2.57	2.69	2.70	2.90	3.43	4.27	3.23	2.59	2.40	2.26	2.00	1.82	1.52	1.26	1.50	1.45	1.39				
2005	1.79	1.46	1.41	1.81	2.39	2.53	2.65	2.65	2.84	3.34	4.12	3.10	2.46	2.22	2.09	1.84	1.65	1.38	1.15	1.30	1.19	1.04	0.69			
2006	1.79	1.47	1.42	1.81	2.39	2.52	2.63	2.63	2.81	3.29	4.04	3.04	2.42	2.20	2.07	1.85	1.69	1.46	1.27	1.42	1.37	1.33	1.30	1.92		
2007	1.81	1.49	1.44	1.83	2.39	2.53	2.64	2.64	2.81	3.28	3.99	3.04	2.45	2.25	2.14	1.95	1.81	1.63	1.50	1.65	1.66	1.70	1.81	2.37	2.83	

All figures are average annual percentages.

Source: Office of the Actuary, Office of Personnel Management; Office of the Actuary, Department of Defense

\*\* The annual averages are different from the prior valuation report due to a refinement in the Treasury Inflation Protected Securities (TIPS) yield calculation.

\*\*\*Real yields for non-TIPS securities are computed as the nominal yield at purchase offset by inflation in the year of purchase.

For TIPS securities, the real yield is known and constant throughout the life of the security.

\*\*\* COMPOSITE SERIES: TREASURY LONG TERM SECURITIES WITH REMAINING MATURITIES OF 10 OR MORE YEARS FROM 1931 TO 1941;  
 AVERAGE OF TREASURY LONG TERM AND TREASURY 3-5 YEARS REMAINING MATURITY FROM 1941 TO 1961;  
 SPECIAL TREASURY CERTIFICATES (CSRS) FROM 1962 TO 1984;  
 MILITARY RETIREMENT SYSTEM TRUST FUND NEW INVESTMENTS BEGINNING WITH 1985

TABLE D-3

## AVERAGE REAL MILITARY RETIREMENT FUND EFFECTIVE YIELD \*\*\*

		FROM PERIOD CORRESPONDING TO END OF FISCAL YEAR:																						
		1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
TO END OF FISCAL YEAR:		1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	
1985	14.27																							
1986	12.32	10.41																						
1987	10.35	8.45	6.52																					
1988	9.31	7.71	6.38	6.24																				
1989	8.47	7.06	5.97	5.70	5.15																			
1990	7.76	6.50	5.55	5.22	4.72	4.29																		
1991	7.49	6.40	5.62	5.39	5.11	5.09	5.90																	
1992	7.34	6.38	5.73	5.57	5.40	5.48	6.08	6.27																
1993	7.22	6.37	5.81	5.69	5.58	5.69	6.16	6.29	6.32															
1994	7.07	6.30	5.80	5.70	5.61	5.70	6.05	6.10	6.02	5.72														
1995	6.96	6.26	5.81	5.72	5.64	5.73	6.02	6.05	5.97	5.80	5.87													
1996	6.84	6.19	5.78	5.70	5.63	5.70	5.94	5.94	5.86	5.71	5.71	5.54												
1997	6.80	6.20	5.83	5.76	5.70	5.77	5.99	6.00	5.95	5.85	5.90	5.91	6.29											
1998	6.81	6.26	5.92	5.87	5.83	5.90	6.11	6.12	6.08	6.17	6.26	6.63	6.97											
1999	6.73	6.21	5.89	5.84	5.80	5.87	6.05	6.07	6.04	5.99	6.04	6.09	6.27	5.56										
2000	6.58	6.09	5.78	5.73	5.68	5.73	5.88	5.88	5.83	5.76	5.76	5.74	5.79	5.63	4.96	4.37								
2001	6.50	6.03	5.75	5.69	5.65	5.69	5.82	5.81	5.76	5.69	5.69	5.66	5.68	5.53	5.05	4.80	5.23							
2002	6.45	6.01	5.74	5.69	5.65	5.69	5.81	5.80	5.75	5.69	5.69	5.66	5.68	5.56	5.21	5.09	5.45	5.68						
2003	6.29	5.86	5.60	5.54	5.50	5.52	5.62	5.59	5.53	5.45	5.42	5.37	5.34	5.19	4.83	4.65	4.74	4.50	3.34					
2004	6.10	5.69	5.43	5.37	5.31	5.33	5.40	5.36	5.29	5.19	5.14	5.06	5.00	4.82	4.46	4.25	4.21	3.88	2.99	2.64				
2005	5.87	5.47	5.22	5.14	5.08	5.07	5.13	5.07	4.98	4.87	4.79	4.69	4.59	4.38	4.02	3.76	3.64	3.25	2.45	2.01	1.39			
2006	5.72	5.33	5.08	5.01	4.94	4.92	4.96	4.90	4.81	4.69	4.60	4.49	4.39	4.18	3.83	3.59	3.46	3.11	2.48	2.19	1.97	2.55		
2007	5.57	5.19	4.95	4.87	4.80	4.78	4.81	4.74	4.64	4.52	4.43	4.31	4.20	3.99	3.67	3.43	3.30	2.98	2.43	2.23	2.09	2.45	2.34	

All figures are average annual percentages.

Source: Office of the Actuary, Department of Defense

\*\*\* THE EFFECTIVE YIELD CALCULATION USES A "DOLLAR-WEIGHTED YIELD". "DOLLAR-WEIGHTED YIELDS" ARE COMPUTED BY TAKING THE INVESTMENT INCOME OVER THE AVERAGE AMOUNT OF PRINCIPAL INVESTED THROUGHOUT THE YEAR.

TABLE D-4

## AVERAGE REAL MILITARY PERSONNEL BASIC PAY INCREASES

FROM DECEMBER 31 OF:		1930	1935	1940	1945	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
TO DECEMBER 31 OF:																										
1935	N/A																									
1940	N/A	N/A																								
1945	N/A	N/A	N/A																							
1950	N/A	N/A	N/A	-2.21																						
1955	N/A	N/A	N/A	-0.48	1.28																					
1960	N/A	N/A	N/A	-0.49	0.39	-0.50																				
1965	N/A	N/A	N/A	0.58	1.52	1.65	3.84																			
1970	N/A	N/A	N/A	0.97	1.79	1.96	3.21	2.58																		
1975	N/A	N/A	N/A	1.31	2.03	2.22	3.14	2.80	3.02																	
1980	N/A	N/A	N/A	0.79	1.30	1.31	1.76	1.08	0.34	-2.26																
1985	N/A	N/A	N/A	0.93	1.39	1.40	1.79	1.28	0.85	-0.21	1.89															
1990	N/A	N/A	N/A	0.77	1.14	1.12	1.40	0.92	0.51	-0.32	0.67	-0.53														
1995	N/A	N/A	N/A	0.70	1.03	0.99	1.21	0.78	0.42	-0.22	0.47	-0.23	0.08													
1996	N/A	N/A	N/A	0.69	1.00	0.97	1.18	0.75	0.41	-0.20	0.45	-0.20	0.08	0.10												
1997	N/A	N/A	N/A	0.69	1.00	0.96	1.16	0.75	0.42	-0.16	0.46	-0.13	0.17	0.39	0.69											
1998	N/A	N/A	N/A	0.71	1.02	0.99	1.19	0.80	0.48	-0.06	0.56	0.06	0.43	1.01	1.48	2.27										
1999	N/A	N/A	N/A	0.74	1.05	1.02	1.22	0.84	0.55	0.04	0.65	0.22	0.64	1.34	1.76	2.31	2.34									
2000	N/A	N/A	N/A	0.73	1.03	1.01	1.20	0.82	0.54	0.05	0.63	0.22	0.59	1.11	1.37	1.60	1.26	0.19								
2001	N/A	N/A	N/A	0.76	1.05	1.03	1.21	0.86	0.58	0.12	0.69	0.32	0.72	1.25	1.48	1.69	1.49	1.07	1.95							
2002	N/A	N/A	N/A	0.79	1.08	1.06	1.25	0.90	0.64	0.21	0.78	0.46	0.88	1.45	1.68	1.88	1.78	1.60	2.31	2.66						
2003	N/A	N/A	N/A	0.80	1.09	1.07	1.26	0.92	0.67	0.26	0.82	0.52	0.93	1.47	1.66	1.83	1.74	1.59	2.06	2.11	1.57					
2004	N/A	N/A	N/A	0.80	1.09	1.07	1.25	0.92	0.68	0.28	0.81	0.53	0.92	1.39	1.55	1.68	1.58	1.43	1.74	1.67	1.17	0.78				
2005	N/A	N/A	N/A	0.77	1.05	1.02	1.20	0.87	0.63	0.24	0.74	0.46	0.79	1.15	1.27	1.34	1.21	1.02	1.19	1.00	0.46	-0.09	-0.96			
2006	N/A	N/A	N/A	0.74	1.01	0.98	1.15	0.82	0.58	0.19	0.67	0.39	0.68	0.95	1.03	1.07	0.92	0.72	0.81	0.59	0.07	-0.42	-1.01	-1.07		
2007	N/A	N/A	N/A	0.75	1.01	0.99	1.15	0.83	0.60	0.22	0.69	0.42	0.70	0.97	1.05	1.08	0.95	0.78	0.86	0.68	0.29	-0.02	-0.29	0.05	1.17	

All figures are average annual percentage increases.  
Excludes annual targeted increases.

Source: House Armed Services Committee publication, Title 37,  
United States Code (Pay and Allowances of the Uniformed Services.)



## APPENDIX E

### NORMAL COST WEIGHTING FACTORS

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## NORMAL COST WEIGHTING FACTORS

There are three different retirement benefit formulas that apply to three populations within the military retirement system. (See Appendix A for a discussion of *Final Pay*, *High-3*, and *CSB/Redux* benefit formulas.) A single normal cost percentage (NCP) for the entire population is obtained by weighting the NCP for each retirement group by its expected percentage of payroll in the relevant year.

In order to continue to budget for NCPs well in advance of the valuation date, the DoD Board of Actuaries decided to create a set of projected weighting factors. The relative stability of past experience indicates that this method gives reasonably accurate results.

Since the composite NCP developed at year-end is implemented each month during the next fiscal year, the weighting factors reflect mid-year experience. For example, when determining the percentage of the payroll during year  $t$  allocated to people who entered in year  $t-1$  or later, we interpolated between 6 percent and 14 percent to obtain 10 percent at mid-year (see the far right column of Table E-1). These mid-year interpolated percentages of payroll are shown in Table 5 of the main text.

Current rates were created using 1987 through 1991 data. Table E-1 displays the active duty basic payroll percentage distribution by completed years of service at the end of each of these fiscal years, as well as average distributions for the two periods, 1982-1987 and 1987-1991.

TABLE E-1

ACTIVE DUTY BASIC PAYROLL PERCENTAGE DISTRIBUTION  
BY COMPLETED YEARS OF SERVICE

Completed Years of Service	Percentage of Payroll on:					Average Percent 1982-1987	Average Percent 1987-1991
	9/30/87	9/30/88	9/30/89	9/30/90	9/30/91		
0	7%	7%	7%	6%	5%	8%	6%
1 or less	15	15	14	13	11	17	14
2 or less	24	23	22	21	19	25	22
3 or less	32	31	30	28	27	33	29
4 or less	37	36	35	34	32	39	35
5 or less	43	42	41	39	37	44	40
6 or less	47	46	45	44	42	49	45
7 or less	52	51	50	48	47	53	50
8 or less	56	55	54	53	51	57	54
9 or less	60	59	58	57	55	61	58
10 or less	64	63	62	60	59	64	62
11 or less	67	66	66	64	63	67	65
12 or less	70	70	69	68	66	72	69
13 or less	73	73	72	72	70	73	72
14 or less	76	76	75	75	74	76	75
15 or less	79	79	78	78	77	79	78
16 or less	82	82	82	81	81	82	81
17 or less	85	85	85	84	84	85	85
18 or less	88	88	88	88	87	88	88
19 or less	91	91	91	91	90	91	91
20 or less	93	93	93	93	93	93	93
21 or less	94	94	94	94	94	94	94
22 or less	96	96	96	96	95	95	96
23 or less	96	96	97	97	97	96	97
24 or less	97	97	97	98	98	97	97
25 or less	98	98	98	98	98	98	98
26 or less	99	99	99	99	99	99	99
27 or less	99	99	99	99	99	99	99
28 or less	99	99	99	99	99	99	99
29 or less	100	100	100	100	100	100	100
TOTAL FORCE	100	100	100	100	100	100	100



APPENDIX F

VALUATION PROGRAM PARAMETERS DESCRIPTION

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## **VALUATION PROGRAM PARAMETERS**

GORGO is the computer program used to compute the aggregate entry-age normal cost percentage and the unfunded liability. In addition to being affected by the external rates, GORGO has a number of internal parameters which affect its results. These parameters are simply summaries of recent experience. Examples include the rates of election of the Survivor Benefit Plan and member-spouse age differences.

Public Law 108-136 requires additional breakouts of some parameters in order to calculate the DoD and Treasury normal cost components.

A description of the various valuation program parameters by population is given in Table F-1. Numerical values are also shown for selected items.

TABLE F-1

## DESCRIPTION OF THE MAJOR VALUATION PROGRAM PARAMETERS

**Economic Factors**

<u>Item</u>	<u>Description/Value</u>
1) Salary Increase	A parameter for each of the next ten fiscal years specifies the annual percentage increase in basic pay for the active duty and reserve members. An 11th parameter specifies the percentage increase for all subsequent years. The value for the current valuation is 3.75%.
2) CPI	A parameter for each of the next nine fiscal years specifies the annual inflation (Consumer Price Index - CPI) rate for that year. A tenth parameter specifies the inflation rate for all subsequent years. The value for the current valuation is 3%.
3) Interest Rate	A parameter for each of the next nine fiscal years specifies the annual interest rate for that year. A tenth parameter specifies the interest rate for all subsequent years. The value for the current valuation is 6%.

**Active Duty**

<u>Item</u>	<u>Description/Value</u>
1) Member Election of Spouse or Spouse/Child SBP Coverage	This gives the percentage of members by age and officer/enlisted status who have elected spouse or spouse/child coverage under the Survivor Benefit Plan (SBP).

TABLE F-1 (continued)

<u>Item</u>	<u>Description/Value</u>
2) Full Offsets	A member who is disabled may waive all or part of his or her retired pay to receive benefits from the Veterans Administration. Furthermore, a member who decides to convert his or her military service to receive a federal civilian retirement also waives his or her right to a military pension. These amounts are not included when computing normal costs or unfunded liabilities. The percent of retired pay of new retirees that is fully offset is given by officer/enlisted status, and type of retirement (disability/nondisability). Disability status is given further by those with over and under 20 years of service.
3) Partial VA Offsets	It is possible to have part of DoD retired pay offset by VA compensation. The percent of retired pay of paid new retirees that is partially offset is the parameter. They are given by officer/enlisted and disability/nondisability status. Disability status is given further by those with over and under 20 years of service.
4) Disability Factor	When an active duty member is disabled and receives DoD disability retirement, his retired pay is based on a minimum (30%), a maximum, and a disability rating. The maximum is given by the conditions discussed in Appendix A regarding Disability Retirement. These are combined into one factor, expressed as a percentage of basic pay, or High-3, and given by length of service and type of retirement (temporary disability/permanent disability).



TABLE F-1 (continued)

<u>Item</u>	<u>Description/Value</u>
5) Percent Active Duty Married	When a member dies from a Service-connected disability or on active duty, any surviving spouse is eligible for Dependency and Indemnity Compensation (DIC) from the Veterans Administration. In addition, if the member dies in the line of duty or after completing 20 years of service, the surviving spouse is eligible for an SBP annuity from DoD which would bring the total amount of the benefit up to 55% of the member's retired pay. The excess of the SBP annuity over DIC comes from the Military Retirement Fund. Thus, it is necessary to estimate the percent of active duty members who are married.
6) Reduction Factors for SBP	Premium amounts, as a percent of retired pay, by age and officer/enlisted status.
7) Rounding Assumptions for Partially Completed Years of Service	When retired pay is computed, years of service are rounded down to the nearest completed month. An assumption must be made for the computation. The value for the current valuation is 0.017.
8) CSB/Redux election proportion	The proportion of members who elect CSB/Redux. The value for the current valuation is 25%.
9) Initial Annual Pay of 16-year-old Active Duty Officer	This value is used to allocate a portion of part-time benefits to full-time in normal cost valuations, thus linking the radixes and pay of full- and part-time members. The value for the current valuation is \$31,786.
10) Accumulated Value of Partial Pay And Disability Retirements in the First Year of Service	This amount is used to properly align the decrement rates with the assumption, in a normal cost run, of a new entrant cohort starting with zero years of service.

TABLE F-1 (continued)

**Reserve**

<u>Item</u>	<u>Description/Value</u>
1) Blow-Up Factors for the Selected Reserve Transferring to Inactive Duty With 20 Good Years	Ratio of Individual Ready Reserve (IRR), Inactive National Guard (ING), and Standby Reserve to every Selected Reserve transferring to inactive duty with 20 good years. This is given by officer/enlisted status, age, and years of active service.
2) Blow-Up Factors for Reserves Transferring to Retired Pay Status	Ratio of IRR, ING, Standby Reserve, and other Reserve to every known Reserve transferring to retired pay status. This is given by officer/enlisted status, age, and years of active service.
3) Adjustment to Blow-Up Factors For Reserves	An additional adjustment to Item 2 (above) is made to the person blow-up factors to better align the total number of retirees due to the modeling changes necessitated by NDAA 2008. This is given by officer/enlisted.
4) Ratio of Net to Gross Retired Pay For Reserves	This is the ratio of reserve net retired pay to gross retired pay. This is given by officer/enlisted status, age, and years of active service.
5) Proportion of Points Based on Active Service	This amount is used to prorate that part of the reserve normal cost that should be paid for as a part of the active duty normal cost. This is given by officer/enlisted status, and years of active service.
6) Mean Age of Reservists Age 63 And Older	This is needed because a small portion of eligible reservists don't retire by age 63. It is given by officer/enlisted status. The values for the current valuation are (Officer: 65.8; Enlisted: 64.4).
7) Reserve New Entrants	Reserve new entrants per 100,000 active duty new entrants. This includes only the reservists who show up on the file for the first time with less than a full year of active duty service. The value for the current valuation is 20,912.

TABLE F-1 (continued)

<u>Item</u>	<u>Description/Value</u>
8) Reserve Points Earned	<p><u>Selected Reserve</u>: Average annual points earned for pay are given by officer/enlisted, age, and years of active service.</p> <p><u>Non-Selected Reserve with 20 or more Good Years</u>: Average career total points for retirement are given by officer/enlisted, age, and years of active service.</p>
9) Reserve Points Adjustment	A small adjustment is made to Reserve Points Earned to reflect the increase in the Inactive Duty Training (IDT) points from 90 to 130 as enacted in NDAA 2008. The adjustment used in the valuation is 1.00225.
10) Initial Annual Pay of 25-year-old Selected Reserve member	This value is used to set an initial pay for a part-time member in a normal cost run. The value for the current valuation is \$39,551.
11) Reserve Retirement Age FYs	An assumption is made to reflect the number of years, on average, reservists retire early due to performing certain active service, per NDAA 2008. An average reduction of two years (age 58) was assumed. Fiscal years are needed to phase into this earlier retirement over time. The transition to an average retirement age of 59 is assumed to occur in 2013, and the transition to age 58 is assumed to occur in 2028. See also page K-12.

## **Retiree**

<u>Item</u>	<u>Description/Value</u>
1) Retired Pay Adjustment Factors	Retired pay of current retirees is adjusted for VA compensation, SBP offset changes, and other effects during the year. They are given by officer/enlisted, disability/nondisability, and whether or not the member has elected SBP spouse or spouse/child coverage.

TABLE F-1 (continued)

<u>Item</u>	<u>Description/Value</u>
2) Other Loss Rate Factors	Rates are needed to calculate the Treasury normal cost. Factors are used to decrease the other loss rates shown in Appendix I. They are given by disability/nondisability, officer/enlisted, and age.
<b><u>Survivor</u></b>	
<u>Item</u>	<u>Description/Value</u>
1) Member-Survivor Age Difference	When a member dies, a survivor is assumed to be a certain number of years younger (or older) than the member. This is given by active/reserve, officer/enlisted status, type of retirement (i.e., nondisability, temporary disability, permanent disability), and type of survivor (i.e., spouse, child, insurable interest).
2) SBP Base-over-Net	Under SBP the retiree may elect an amount less than his or her gross retired pay as a base in computing the survivor annuity. This is expressed as a percentage of net retired pay and is given by age and officer/enlisted status.
3) RSFPP Benefit-over-Net	For RSFPP, this gives the ratio of the survivor payment to the net amount of retired pay.
4) Reservists' Election of RCSBP	Proportion of reservists who have elected the Reserve Component Survivor Benefit Plan (RCSBP) by immediate and deferred annuity, age, and officer/enlisted status.
5) Partial DIC Offsets	The percent of survivor pay of new survivors whose pay is partially offset by DIC. They are given by the member's active/reserve status.

TABLE F-1 (continued)

<u>Item</u>	<u>Description/Value</u>
6) Full DIC Offsets	The percent of survivor pay of new survivors whose pay is fully offset by DIC. They are given by the member's active/reserve status.
7) Rates for Electing SBP Options	Given that a member elects SBP, there is still a choice of options: spouse only, child only, spouse and child, or insurable interest (some other designated beneficiary in the absence of a spouse or child). These are expressed as ratios to those electing spouse only or spouse/child coverage, and are given by age and officer/enlisted status.
8) Rates for Election of RSFPP Options	Given that a member elected an RSFPP (Retired Servicemen's Family Protection Plan) option, there was a choice of options: spouse only, child only, or spouse and child. These are expressed as ratios to those electing spouse only or spouse/child coverage, and are given by age and officer/enlisted status.
9) Survivor Pay Adjustment Factors	Survivor pay of current survivors is adjusted for changes in DIC and other effects during the year.
10) DIC Base Amount	Monthly amount by which DoD annuitant pay is offset by DIC. Future values are indexed to CPI. The first-year value for the current valuation is \$1,092.



## APPENDIX G

### ACTIVE DUTY RATES

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## **ACTIVE DUTY RATES**

The active duty rates consist principally of decrement rates related to the probabilities of a member leaving a category of Military Service for a specific cause. In addition, they include a new entrant distribution, a set of reentrant ratios, and ratios for promotion and merit pay increases.

The active duty decrement rates are used to project active duty deaths, temporary and permanent disability retirements, nondisability retirements, and withdrawals (i.e., other active duty losses). In addition, the active duty decrements include rates of transfer between officer and enlisted status. The death rates are given by age nearest birthday for officers and enlistees separately. The remaining decrement rates are given by completed years of active service for officers and enlistees separately. The formulas used to create the active duty rates are given on page G-3. The fiscal years on which various rates are based are given on page G-4. The experience period was selected such that the sum of the active force size changes for the included periods was near zero. Because of the large number of cases available and the need to avoid smoothing through real discontinuities, the nondisability retirement and withdrawal rates were not graduated (smoothed). The remaining rates were separated into ranges where assumptions of continuity were reasonable. Except for a few of these ranges where means or ungraduated rates were used, the remaining rates were smoothed using Whittaker-Henderson graduations.

A reentrant is defined as someone who is on active duty at year end, who was not on active duty a year earlier, and who is not a new entrant. The reentrant ratios give the expected number of reentrants per year, per active member, in each cell. The cells are defined by length of service and by officer/enlisted status.

The new entrant distribution gives the percentages of new entrants to the military by age and by officer/enlisted status.

The promotion and merit increase scales (PAMS) give the expected annual percentage increase in pay regardless of whether or not there are across-the-board increases in the active duty pay table. The PAMS do not include adjustments for inflation or productivity increases. They are defined by length of service, by entry age, and by officer/enlisted status. The PAMS were created by first arraying the average pay for each entry along a dimension of increasing years of service. The PAMS were then computed by dividing the average pay at the next year of service by the average pay at the current year of service.



## ACTIVE DUTY RATE FORMULAS

ACTIVE DEATH (by age nearest birthday)

$$\frac{\text{Deaths during year}}{[\text{Number at beginning of year} - \frac{1}{2} (\text{withdrawals} + \text{nondisability retirements during year})]}$$

NONDISABILITY RETIREMENT (by completed years of service)

$$\frac{\text{New retirees during year}}{\text{Number at beginning of year}}$$

TEMPORARY DISABILITY RETIREMENT (by completed years of service)

$$\frac{\text{New temporary disabilities during year}}{[\text{Number at beginning of year} - \frac{1}{2} (\text{withdrawals} + \text{nondisability retirements during year})]}$$

PERMANENT DISABILITY RETIREMENT (by completed years of service)

$$\frac{\text{New permanent disabilities during year}}{[\text{Number at beginning of year} - \frac{1}{2} (\text{withdrawals} + \text{nondisability retirements during year})]}$$

WITHDRAWAL (by completed years of service)

$$\frac{\text{Withdrawals during year}}{\text{Number at beginning of year}}$$

REENTRANT RATIOS (by completed years of service)

$$\frac{\text{Number reentering during year}}{\text{Number at beginning of year}}$$

PERCENTAGE DISTRIBUTION OF NEW ENTRANTS (by age nearest birthday)

$$\frac{\text{New entrants during year}}{\text{Total new entrants}}$$

TRANSFER (by completed years of service)

$$\frac{\text{Transfers to category during year}}{[\text{Number at beginning of year} - \frac{1}{2} (\text{withdrawals} + \text{nondisability retirements during year})]}$$

PROMOTION AND MERIT SCALES (by entry age and completed years of service)

$$\frac{\text{Average basic pay at next year of service}}{\text{Average basic pay at current year of service}}$$

**SUMMARY OF YEARS ON WHICH RATES ARE BASED**

Fiscal Years on Which Rates Are Based

<u>RATE</u>	<u>1982-1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>
Death		X	X	X	X	X	X	X	X		
Nondisability Retirement	X								X	X	
Temporary Disability Retirement	X								X	X	X
Permanent Disability Retirement	X								X	X	X
Withdrawal	X								X	X	X
Reentrant Ratios	X								X	X	X
New Entrant Distribution	X								X	X	X
Transfer	X								X	X	X
Promotion and Merit Scales	X								X	X	X

## DEATH RATES FOR NONRETIRED MILITARY

(Age Nearest Birthday)

<u>Age</u>	<u>Officer</u>	<u>Enlisted</u>	<u>Age</u>	<u>Officer</u>	<u>Enlisted</u>
16	0.00030	0.00067	39	0.00037	0.00057
17	0.00033	0.00074	40	0.00037	0.00061
18	0.00035	0.00079	41	0.00038	0.00065
19	0.00036	0.00079	42	0.00038	0.00070
20	0.00038	0.00077	43	0.00040	0.00073
21	0.00040	0.00074	44	0.00043	0.00076
22	0.00041	0.00069	45	0.00047	0.00080
23	0.00049	0.00063	46	0.00052	0.00086
24	0.00055	0.00057	47	0.00057	0.00093
25	0.00059	0.00051	48	0.00062	0.00102
26	0.00061	0.00048	49	0.00068	0.00113
27	0.00061	0.00045	50	0.00073	0.00127
28	0.00059	0.00044	51	0.00079	0.00144
29	0.00057	0.00045	52	0.00085	0.00162
30	0.00054	0.00046	53	0.00091	0.00180
31	0.00050	0.00047	54	0.00097	0.00199
32	0.00047	0.00047	55	0.00108	0.00221
33	0.00044	0.00047	56	0.00121	0.00248
34	0.00043	0.00047	57	0.00137	0.00281
35	0.00042	0.00048	58	0.00155	0.00319
36	0.00039	0.00048	59	0.00176	0.00362
37	0.00039	0.00050	60	0.00200	0.00409
38	0.00038	0.00053			

Note: These death rates should not be compared to other published rates or used for other purposes without examining the exposure formula used in the derivation.

# NONDISABILITY, TEMPORARY DISABILITY & PERMANENT DISABILITY RETIREMENT RATES

## OFFICERS (BY COMPLETED YEARS OF SERVICE)

<u>Service</u>	<u>Non- disability</u>	<u>Temporary Disability</u>	<u>Permanent Disability</u>
0	0.00000	0.00051	0.00012
1	0.00000	0.00087	0.00009
2	0.00000	0.00099	0.00011
3	0.00000	0.00115	0.00016
4	0.00000	0.00130	0.00017
5	0.00000	0.00129	0.00018
6	0.00000	0.00128	0.00033
7	0.00000	0.00126	0.00032
8	0.00000	0.00124	0.00032
9	0.00000	0.00121	0.00033
10	0.00000	0.00118	0.00032
11	0.00000	0.00115	0.00031
12	0.00000	0.00111	0.00031
13	0.00000	0.00107	0.00031
14	0.00000	0.00103	0.00033
15	0.00000	0.00098	0.00038
16	0.00000	0.00094	0.00046
17	0.00000	0.00089	0.00056
18	0.00000	0.00084	0.00065
19	0.24055	0.00275	0.00145
20	0.21309	0.00306	0.00186
21	0.16279	0.00226	0.00170
22	0.14225	0.00266	0.00161
23	0.14163	0.00313	0.00190
24	0.13776	0.00272	0.00182
25	0.17677	0.00319	0.00158
26	0.18520	0.00541	0.00261
27	0.21555	0.00462	0.00194
28	0.20353	0.00501	0.00339
29	0.47452	0.00795	0.00459
30	0.38848	0.01134	0.00630
31	0.29656	0.00848	0.00446
32	0.26316	0.00848	0.00446
33	0.26941	0.00848	0.00446
34	1.00000	0.00848	0.00446

\*\*\* The increase in disability rates shown between 18 and 19 years of service may be due to the removal of the 30% disability rating minimum for members with 20 years of service. The tax advantages accorded disability retired pay described in Appendix A may result in members choosing disability over nondisability retirements.

Example: Nine completed years of service could include anything from 9.0 to 9.999 years of service. The associated rate applied to the number of people at the beginning of the year in the category will produce the expected number of occurrences during the following year.

# **NONDISABILITY, TEMPORARY DISABILITY & PERMANENT DISABILITY RETIREMENT RATES**

## **ENLISTED (BY COMPLETED YEARS OF SERVICE)**

<b>Service</b>	<b>Non- disability</b>	<b>Temporary Disability</b>	<b>Permanent Disability</b>
0	0.00000	0.00124	0.00008
1	0.00000	0.00184	0.00018
2	0.00000	0.00219	0.00025
3	0.00000	0.00262	0.00031
4	0.00000	0.00233	0.00038
5	0.00000	0.00236	0.00044
6	0.00000	0.00239	0.00051
7	0.00000	0.00240	0.00058
8	0.00000	0.00241	0.00064
9	0.00000	0.00242	0.00071
10	0.00000	0.00241	0.00078
11	0.00000	0.00240	0.00089
12	0.00000	0.00238	0.00090
13	0.00000	0.00234	0.00093
14	0.00000	0.00230	0.00090
15	0.00000	0.00225	0.00113
16	0.00000	0.00218	0.00127
17	0.00000	0.00211	0.00135
18	0.00000	0.00202	0.00141
19	0.41610	0.00737	0.00423
20	0.30413	0.00699	0.00486
21	0.26512	0.00548	0.00375
22	0.23263	0.00589	0.00381
23	0.26045	0.00507	0.00361
24	0.16114	0.00504	0.00328
25	0.29534	0.00578	0.00320
26	0.24573	0.00644	0.00357
27	0.25008	0.00730	0.00401
28	0.20681	0.00752	0.00562
29	0.73967	0.01515	0.00751
30	0.58234	0.02688	0.01132
31	0.42527	0.02243	0.00303
32	0.52915	0.02243	0.00303
33	0.36341	0.02243	0.00303
34	1.00000	0.02243	0.00303

\*\*\* The increase in disability rates shown between 18 and 19 years of service may be due to the removal of the 30% disability rating minimum for members with 20 years of service. The tax advantages accorded disability retired pay described in Appendix A may result in members choosing disability over nondisability retirements.

Example: Nine completed years of service could include anything from 9.0 to 9.999 years of service. The associated rate applied to the number of people at the beginning of the year in the category will produce the expected number of occurrences during the following year.

**WITHDRAWAL, REENTRANT, AND NET LOSS RATES  
FOR ACTIVE DUTY PERSONNEL**

**OFFICERS (BY COMPLETED YEARS OF SERVICE)**

<u>Service</u>	<u>Withdrawal</u>	<u>Reentrant</u>	<u>Net Loss</u>
0	0.02174	0.11396	-0.09222
1	0.02292	0.02737	-0.00445
2	0.08449	0.02111	0.06338
3	0.11869	0.02417	0.09452
4	0.10029	0.01435	0.08594
5	0.09043	0.01306	0.07737
6	0.09615	0.01156	0.08459
7	0.08380	0.00997	0.07383
8	0.07228	0.00839	0.06389
9	0.05860	0.00694	0.05166
10	0.06714	0.00568	0.06146
11	0.05605	0.00469	0.05136
12	0.03763	0.00400	0.03363
13	0.02325	0.00366	0.01959
14	0.01663	0.00252	0.01411
15	0.01056	0.00221	0.00835
16	0.00783	0.00205	0.00578
17	0.00547	0.00193	0.00354
18	0.00242	0.00174	0.00068
19	0.00000	0.00139	-0.00139
20	0.00000	0.00151	-0.00151
21	0.00000	0.00157	-0.00157
22	0.00000	0.00161	-0.00161
23	0.00000	0.00164	-0.00164
24	0.00000	0.00169	-0.00169
25	0.00000	0.00180	-0.00180
26	0.00000	0.00199	-0.00199
27	0.00000	0.00231	-0.00231
28	0.00000	0.00278	-0.00278
29	0.00000	0.00344	-0.00344
30	0.00000	0.00658	-0.00658
31	0.00000	0.00455	-0.00455
32	0.00000	0.00779	-0.00779
33	0.00000	0.00737	-0.00737
34	0.00000	0.00000	0.00000

\*\*\* The reentrant (and all other) rates are developed for valuation purposes to be consistent with the data sources used in the valuation. For example, high reentrant rates for members with zero completed years of service at the beginning of the year reflect members showing up on the valuation data files with one completed year of service at year end, who were not on the data files at the beginning of the year, and who were not new entrants. To the extent the valuation data files exclude these members from the zero-completed-years-of-service cell, use of this reentrant rate is appropriate for the valuation projection. However, this "valuation focus" of the rates should be considered if using them for other purposes, e.g., to estimate the probability a given individual will remain on active duty from zero to one or more completed years of service.

Example: Nine completed years of service could include anything from 9.0 to 9.999 years of service. The associated rate applied to the number of people at the beginning of the year in the category will produce the expected number of occurrences during the following year.

**WITHDRAWAL, REENTRANT, AND NET LOSS RATES  
FOR ACTIVE DUTY PERSONNEL**

**ENLISTED (BY COMPLETED YEARS OF SERVICE)**

<u>Service</u>	<u>Withdrawal</u>	<u>Reentrant</u>	<u>Net Loss</u>
0	0.10365	0.02826	0.07539
1	0.11686	0.00610	0.11076
2	0.23581	0.01688	0.21893
3	0.38351	0.03133	0.35218
4	0.14331	0.01289	0.13042
5	0.16240	0.01066	0.15174
6	0.12406	0.00886	0.11520
7	0.12101	0.00797	0.11304
8	0.09350	0.00682	0.08668
9	0.09044	0.00544	0.08500
10	0.05784	0.00412	0.05372
11	0.05054	0.00320	0.04734
12	0.04103	0.00246	0.03857
13	0.02841	0.00191	0.02650
14	0.02716	0.00155	0.02561
15	0.01682	0.00141	0.01541
16	0.01168	0.00115	0.01053
17	0.00825	0.00106	0.00719
18	0.00410	0.00116	0.00294
19	0.00000	0.00129	-0.00129
20	0.00000	0.00155	-0.00155
21	0.00000	0.00141	-0.00141
22	0.00000	0.00129	-0.00129
23	0.00000	0.00117	-0.00117
24	0.00000	0.00112	-0.00112
25	0.00000	0.00108	-0.00108
26	0.00000	0.00104	-0.00104
27	0.00000	0.00087	-0.00087
28	0.00000	0.00066	-0.00066
29	0.00000	0.00043	-0.00043
30	0.00000	0.00165	-0.00165
31	0.00000	0.00289	-0.00289
32	0.00000	0.00438	-0.00438
33	0.00000	0.00484	-0.00484
34	0.00000	0.00000	0.00000

\*\*\* The reentrant (and all other) rates are developed for valuation purposes to be consistent with the data sources used in the valuation. For example, high reentrant rates for members with zero completed years of service at the beginning of the year reflect members showing up on the valuation data files with one completed year of service at year end, who were not on the data files at the beginning of the year, and who were not new entrants. To the extent the valuation data files exclude these members from the zero-completed-years-of-service cell, use of this reentrant rate is appropriate for the valuation projection. However, this "valuation focus" of the rates should be considered if using them for other purposes, e.g., to estimate the probability a given individual will remain on active duty from zero to one or more completed years of service.

Example: Nine completed years of service could include anything from 9.0 to 9.999 years of service. The associated rate applied to the number of people at the beginning of the year in the category will produce the expected number of occurrences during the following year.

## PERCENTAGE DISTRIBUTION OF NEW ENTRANTS

(Age Nearest Birthday)

<u>Age</u>	<u>Officers</u>	<u>Enlisted</u>	<u>Total</u>
16	0.00000	0.00000	0.00000
17	0.00000	0.00137	0.00137
18	0.00000	0.13096	0.13096
19	0.00000	0.26062	0.26062
20	0.00002	0.19630	0.19632
21	0.00025	0.11244	0.11268
22	0.01331	0.07001	0.08333
23	0.01974	0.04755	0.06729
24	0.01169	0.03352	0.04520
25	0.00581	0.02349	0.02930
26	0.00466	0.01621	0.02087
27	0.00363	0.01124	0.01487
28	0.00238	0.00823	0.01060
29	0.00174	0.00556	0.00731
30	0.00142	0.00379	0.00521
31	0.00107	0.00283	0.00390
32	0.00081	0.00210	0.00291
33	0.00063	0.00167	0.00230
34	0.00052	0.00132	0.00185
35	0.00043	0.00116	0.00159
36	0.00028	0.00031	0.00059
37	0.00018	0.00003	0.00021
38	0.00015	0.00000	0.00015
39	0.00012	0.00000	0.00012
40	0.00010	0.00000	0.00010
41	0.00007	0.00000	0.00007
42	0.00005	0.00000	0.00005
43	0.00004	0.00000	0.00004
44	0.00004	0.00000	0.00004
45	0.00002	0.00000	0.00002
46	0.00003	0.00000	0.00003
47	0.00001	0.00000	0.00001
48	0.00001	0.00000	0.00001
49	0.00002	0.00000	0.00002
50	0.00001	0.00000	0.00001
51	0.00001	0.00000	0.00001
52	0.00001	0.00000	0.00001
53	0.00001	0.00000	0.00001
54	0.00001	0.00000	0.00001
55	0.00001	0.00000	0.00001
	0.06928	0.93072	1.00000



## TRANSFER RATES (BY COMPLETED YEARS OF SERVICE)

<u>Service</u>	<u>Officer to Enlisted</u>	<u>Enlisted to Officer</u>
0	0.00065	0.00286
1	0.00015	0.00095
2	0.00007	0.00092
3	0.00021	0.00119
4	0.00021	0.00189
5	0.00013	0.00223
6	0.00021	0.00298
7	0.00020	0.00383
8	0.00020	0.00522
9	0.00019	0.00613
10	0.00019	0.00646
11	0.00066	0.00645
12	0.00101	0.00646
13	0.00084	0.00609
14	0.00133	0.00483
15	0.00163	0.00366
16	0.00184	0.00256
17	0.00088	0.00164
18	0.00021	0.00104
19	0.00011	0.00089
20	0.00009	0.00109
21	0.00004	0.00103
22	0.00002	0.00085
23	0.00000	0.00107
24	0.00000	0.00056
25	0.00000	0.00009
26	0.00000	0.00004
27	0.00000	0.00005
28	0.00000	0.00000
29	0.00000	0.00000
30	0.00000	0.00000
31	0.00000	0.00000
32	0.00000	0.00000
33	0.00000	0.00000
34	0.00000	0.00000

Example: Nine completed years of service could include anything from 9.0 to 9.999 years of service. The associated rate applied to the number of people at the beginning of the year in the category will produce the expected number of occurrences during the following year.

# OFFICER PROMOTION AND MERIT BASIC PAY INCREASE RATIOS

YOS	ENTRY AGE										26
	16	17	18	19	20	21	22	23	24	25	
1	1.02960	1.05402	1.03101	1.04157	1.07941	1.01919	1.01625	1.05109	1.08448	1.08162	1.04729
2	1.02690	1.04637	1.03921	0.96253	1.07706	1.12327	1.26483	1.26021	1.24336	1.21657	1.13472
3	1.02117	1.03853	1.05810	1.10337	1.13526	1.20643	1.16530	1.14780	1.13234	1.12195	1.08004
4	1.01271	1.03292	1.04215	1.01499	1.07032	1.08744	1.13641	1.12337	1.10275	1.08820	1.06205
5	1.00156	1.03089	1.02304	1.04543	1.04426	1.02712	1.02409	1.03070	1.03715	1.03834	1.03465
6	1.00104	1.03252	1.06923	1.04631	1.04164	1.04448	1.04725	1.04022	1.03563	1.04188	1.05260
7	1.01239	1.03610	1.01804	1.02035	1.01049	1.00866	1.00468	1.01488	1.02372	1.02641	1.02294
8	1.03376	1.03959	1.05509	1.05325	1.03895	1.03553	1.04640	1.03919	1.03457	1.03947	1.04019
9	1.04431	1.04188	1.02131	1.02069	1.01761	1.01299	1.00878	1.01516	1.01995	1.01980	1.01903
10	1.05373	1.04037	1.05744	1.04990	1.03920	1.03625	1.04790	1.04074	1.03550	1.03661	1.03424
11	1.05483	1.03819	1.02031	1.02442	1.02613	1.02161	1.03065	1.05037	1.05889	1.04654	1.02979
12	1.05111	1.05792	1.05988	1.05456	1.04991	1.04556	1.08616	1.07245	1.05870	1.05128	1.03940
13	1.03345	1.02374	1.02416	1.02779	1.02372	1.02202	1.00967	1.01616	1.01978	1.02113	1.01862
14	1.01414	1.03220	1.05623	1.05332	1.04446	1.03648	1.03251	1.02831	1.02537	1.02597	1.02662
15	0.98835	1.03073	1.02689	1.02532	1.02438	1.02244	1.01192	1.01411	1.01858	1.02067	1.02149
16	0.97823	1.04934	1.04090	1.03735	1.03648	1.03519	1.03890	1.03954	1.03747	1.03377	1.03240
17	0.98404	1.02860	1.02405	1.02705	1.02391	1.02290	1.02838	1.02859	1.02631	1.02723	1.02257
18	1.00231	1.03436	1.04702	1.04331	1.03992	1.03496	1.03341	1.02813	1.02451	1.02479	1.02680
19	1.01170	1.02442	1.02579	1.02490	1.02042	1.01519	1.00713	1.00965	1.01110	1.01347	1.01540
20	1.02120	1.04516	1.03805	1.03243	1.02990	1.03632	1.04084	1.03832	1.03979	1.04265	1.04393
21	1.03972	1.01899	1.02369	1.02204	1.02019	1.01878	1.03677	1.04340	1.04301	1.03939	1.03162
22	1.06072	1.03302	1.02792	1.02674	1.02748	1.03874	1.05864	1.05585	1.05161	1.04677	1.03327
23	1.08588	1.02794	1.01921	1.02099	1.02088	1.02238	1.03059	1.02862	1.02738	1.02920	1.02167
24	1.08557	1.03514	1.02855	1.02584	1.03168	1.02992	1.03065	1.02608	1.02410	1.02229	1.01778
25	1.07207	1.02870	1.01868	1.02308	1.02020	1.02252	1.01391	1.01980	1.02364	1.02097	1.01033
26	1.04994	1.02872	1.03364	1.03687	1.03140	1.03227	1.04749	1.03802	1.03200	1.02402	1.01959
27	1.04246	1.02535	1.02308	1.02209	1.01986	1.01423	1.01555	1.01319	1.00928	1.00968	1.00811
28	1.04335	1.02647	1.02372	1.02178	1.02048	1.01660	1.02287	1.02553	1.02777	1.02693	1.01963
29	1.04587	1.02518	1.02389	1.02299	1.01448	1.02385	1.01917	1.01828	1.01227	1.01300	1.00478
30	1.05079	1.04399	1.04815	1.05554	1.05287	1.04764	1.05196	1.05376	1.04634	1.04455	1.02469
31	1.05236	1.03639	1.05120	1.04182	1.01942	1.02587	1.06809	1.07360	1.04792	1.07708	1.01670
32	1.04893	1.03758	1.04063	1.01630	1.00985	1.01923	1.05506	1.04896	1.02991	1.05567	1.03508
33	1.04531	1.03821	1.02932	1.02172	1.00741	1.02828	1.03054	1.03483	1.03263	1.03472	1.02905
34	1.04517	1.03832	1.01549	1.01640	1.02913	0.96704	0.91974	0.93854	0.98681	0.99179	1.04032

Note: The number that appears, for example, in the column marked '20' and the row marked '2' is the ratio of basic pay at two years of service to basic pay at one year of service for a member who entered at age 20.

# ENLISTED PROMOTION AND MERIT BASIC PAY INCREASE RATIOS

YOS	ENTRY AGE										
	16	17	18	19	20	21	22	23	24	25	26
1	1.12947	1.13723	1.15470	1.13375	1.11247	1.10710	1.10277	1.09680	1.09255	1.09084	1.09443
2	1.08924	1.10940	1.11242	1.10787	1.10528	1.10542	1.10660	1.10775	1.10800	1.10801	1.10786
3	1.06307	1.10367	1.10085	1.09924	1.09771	1.09737	1.09544	1.09242	1.09094	1.09023	1.08723
4	1.05160	1.09973	1.08218	1.07113	1.06609	1.06544	1.06455	1.06438	1.06373	1.06342	1.06529
5	1.04312	1.03506	1.03300	1.04023	1.04194	1.04082	1.04076	1.04089	1.04254	1.04273	1.04513
6	1.05899	1.08634	1.07878	1.06817	1.06464	1.06507	1.06590	1.06545	1.06526	1.06535	1.06329
7	1.02519	1.02836	1.02934	1.03663	1.03864	1.03782	1.03719	1.03705	1.03562	1.03497	1.03542
8	1.03964	1.09170	1.07953	1.06968	1.06506	1.06480	1.06461	1.06410	1.06402	1.06474	1.05992
9	1.02333	1.02151	1.02202	1.02710	1.02934	1.02902	1.02819	1.02767	1.02791	1.02754	1.02735
10	1.01796	1.05429	1.05364	1.04960	1.04729	1.04628	1.04597	1.04608	1.04515	1.04513	1.04341
11	1.02025	1.02075	1.01908	1.02131	1.02285	1.02318	1.02247	1.02334	1.02277	1.02407	1.02359
12	1.02849	1.05004	1.04551	1.04080	1.03922	1.03834	1.03762	1.03685	1.03607	1.03582	1.03442
13	1.03370	1.01930	1.01988	1.02425	1.02531	1.02532	1.02483	1.02372	1.02347	1.02356	1.02193
14	1.03482	1.05602	1.05054	1.04481	1.04324	1.04023	1.03830	1.03623	1.03595	1.03431	1.03209
15	1.03514	1.01447	1.02056	1.02290	1.02307	1.02359	1.02255	1.02320	1.02243	1.02260	1.02244
16	1.04109	1.03723	1.03590	1.03394	1.03308	1.03122	1.03066	1.03028	1.02850	1.02801	1.02475
17	1.05096	1.01520	1.02045	1.02220	1.02238	1.02364	1.02264	1.02245	1.02203	1.02152	1.01954
18	1.05790	1.04411	1.04084	1.03793	1.03672	1.03370	1.03250	1.03177	1.02999	1.02863	1.02587
19	1.05879	1.01788	1.01848	1.01929	1.01865	1.01887	1.01942	1.02034	1.01983	1.02081	1.01888
20	1.05565	1.05714	1.06111	1.06305	1.06599	1.07011	1.07480	1.07427	1.07836	1.07919	1.08526
21	1.05344	1.04808	1.04113	1.04125	1.04053	1.03979	1.04264	1.04470	1.04311	1.04769	1.04568
22	1.05288	1.06812	1.06966	1.06435	1.06217	1.06116	1.06117	1.06024	1.06227	1.05608	1.05456
23	1.05139	1.02925	1.02959	1.03359	1.03569	1.03721	1.03710	1.03556	1.03635	1.03809	1.03105
24	1.04806	1.05519	1.05994	1.05924	1.06065	1.06277	1.05913	1.05797	1.05929	1.05739	1.05144
25	1.04398	1.02416	1.02584	1.03018	1.03079	1.02679	1.02642	1.02223	1.02450	1.02881	1.02584
26	1.03847	1.08932	1.08575	1.08419	1.08210	1.07636	1.07333	1.07398	1.06622	1.04952	1.04457
27	1.03268	1.01962	1.02170	1.02152	1.02044	1.02117	1.02364	1.02133	1.02352	1.02863	1.02012
28	1.02745	1.01489	1.02237	1.02305	1.02114	1.01949	1.02161	1.02117	1.01667	1.01546	1.02454
29	1.02125	1.01649	1.00877	1.00802	1.00923	1.01069	1.00947	1.00904	1.00607	1.00752	1.00419
30	1.01520	1.00341	1.01462	1.00888	1.00528	1.00932	1.00628	1.00164	1.00597	1.01290	1.00868
31	1.00927	1.00963	1.00832	1.00419	1.00446	1.00843	0.99507	1.01022	1.01282	1.00402	1.03577
32	1.00354	1.00631	1.00680	1.00416	0.99933	1.00033	1.02788	0.99826	1.00537	1.00070	1.00210
33	0.99791	1.00435	0.99835	0.99080	1.00821	1.01017	1.00292	0.99272	1.00398	0.99823	0.99946
34	0.99218	1.00411	1.02166	1.01525	0.99839	0.99344	1.00117	0.98713	1.00315	0.99642	1.02711

Note: The number that appears, for example, in the column marked '20' and the row marked '2' is the ratio of basic pay at two years of service to basic pay at one year of service for a member who entered at age 20.



## APPENDIX H

### RESERVE RATES

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## **RESERVE RATES**

The reserve rates consist of (1) separation rates, (2) column-transfer rates, (3) the distribution of new entrants or reentrants into the Selected Reserve, (4) a table that shows the timing of when new entrants or reentrants enter, and (5) ratios for promotion and merit pay.

The separation rates give the probability that a member in a given status at the beginning of the fiscal year leaves the status during the fiscal year. Separation rates from the Selected Reserve, shown on pages H-6 and H-7, include ordinary losses, transfers to active duty, discharge, and death. A transfer of a Selected Reservist from officer to enlisted status or vice versa is treated as a separation combined with a reentrance. They do not include transfers to non-Selected Reserves with 20 good years, or retirement. Separations from the Selected Reserve to the non-Selected Reserve with 20 good years are shown on pages H-8 and H-9. Separation rates from the non-Selected Reserve with 20 good years, shown on pages H-10 and H-11, include transfer to Selected Reserve, death, discharge, and file corrections and timing delays. They do not include transfer to retirement. Separations from the Selected Reserve and non-Selected Reserves with 20 good years to retirement are shown on pages H-12 and H-13, respectively. The separation rates are given by age of reservist, number of years of active duty service, and whether the reservist is an officer or enlistee.

Column-transfer rates give the rate at which a member will accrue enough active service to move from one completed years of total active federal military service column to the next as a result of active duty for special work, mobilizations, summer camp, and initial active duty for training. These rates are shown on pages H-14 and H-15.

The separation rates are based on fiscal years 1997-2000. In most cases the separation rates are not smoothed. However, cells with numerators of fewer than 20 cases were combined with other cells or smoothed by fitting equations to the data using weighted-least-squares regression. The column-transfer rates are based on fiscal years 1998-2001. They are smoothed over all ages and years of active service using weighted-least-squares regression.

The distribution of new entrants and reentrants into the Selected Reserve is used for both open group and closed group projections. This distribution gives the proportion of entrants by officer/enlisted, age nearest birthday, and completed years of active duty service. The cell count for the complete table, including both officers and enlisted, is 100,000. For this purpose, a new entrant or reentrant is defined as someone who was actively on the Reserve Component Common Personnel Data System file at the end of a fiscal year, but not at the beginning. The entrant/reentrant distribution was determined using fiscal years 1997-2000, and is shown on pages H-16 and H-17.

The timing table has the same dimensions as the entrant/reentrant distribution and operates in concordance with it. Every cell of the timing table has an integer representing the year in which persons in that cell enter. The timing table is based on fiscal years 1997-2000.

This table is shown on pages H-18 and H-19. How the table is used depends on the type of projection. Following is an explanation of its use in open group, normal cost, and closed group projections.

Due to Section 647 of NDAA 2008 (P.L. 110-181) the rates shown on pages H-6 through H-13 apply in the early years of the projection. See Item 11 in the Reserve section in Appendix F for a description of the parameter used to model the phase-in to an average age 58 reserve retirement. As the transitions to earlier average retirement ages occur, the ages applicable to some of the rates change.

### **Open Group**

In an open group projection, new entrants and reentrants are used to bring the part-time Selected Reserve up to DoD Comptroller-provided projected strengths in future years of the projection. For an open group run, all cells of the entrant/reentrant distribution are treated equally. If the needed number of new entrants and reentrants equals 150,000 for some future year, for example, the number brought in corresponding to each cell of the entrant/reentrant distribution would be  $(n_{ij} / 100,000) \times 150,000$ , where  $n_{ij}$  is the cell count for row  $i$  and column  $j$  of the entrant/reentrant distribution. In this example, we would bring in 333 ( $1.5 \times 222$ ) officers aged 29 with under a year of service.

### **Normal Cost**

For normal cost runs, part of an entering cohort first goes to active duty or an ROTC program, but later shows up as a new entrant to the part-time Selected Reserves. In addition, some leave the part-time Selected Reserves and later show up as a reentrant.

This process is simulated in the normal cost run by having the new or reentrant Reservists corresponding to each cell of the timing table show up only when appropriate. In a normal cost run, all cells of the entrant/reentrant distribution will enter only once. Some cells enter the first year. Some cells enter the second year, and so on. Every cell enters, but no cell enters more than once.

The timing table is used to determine when various cells enter in a normal cost run. For example, 23-year-old officers with less than a year of active service are expected to enter the fourth year of the projection. Similarly, 56-year-old officers with 5 years of active service enter in the thirty-first year of the projection. The latter would most likely be reentrants, and the former, new entrants.

The new entrant/reentrant distribution does not distinguish between new entrants and reentrants. They represent people who are in the part-time Selected Reserves at the end of the fiscal year who were not there at the beginning. This is also true for the timing table. The one exception is that cases with a value of 1 are always new entrants. However, there are new entrants that have spent some time on active duty who show up in the same cells that have reentrants in them.

The multiplier (or radix) for a normal cost run in one sense does not matter, because the present value of benefits and the present value of salary change proportionately with it. However, part of the Reserve retirements are paid for with the active duty normal cost, since part of the Reserve retirement is attributable to active duty service. For this reason the radices for part-time and full-time normal costs must be calibrated, so that in the steady state the part-time population is the proper size relative to the active duty force. The present value of Reserve retirement attributable to active duty service may then simply be added to the present value of retirement benefits attributable to active duty service. For the current valuation, this calibration results in 75,823 new entrants/reentrants to the Selected Reserves each year for every 100,000 new entrants to active duty. The portion of the 75,823 that are new entrants to the military is 20,912; this then is the Reserve normal cost radix. This radix is determined by allocating 75,823 according to the entrant/reentrant distribution and choosing the cells for which the value of the timing table equals 1. Thus, throughout the course of the normal cost projection, a total of 75,823 enter (or reenter) the Selected Reserve, 20,912 of whom enter the military for the first time as Selected Reservists.

### **Closed Group**

Closed-group runs form the basis for the calculation of the actuarial liability and exclude anyone who enters the military for the first time after the valuation date. For closed group runs, no new entrants or reentrants are brought in for cells with a value of 1 in the timing table. To do so would effectively bring in a cohort whose first military service began after the date of the valuation. For cells whose value is 2, no new entrants or reentrants are brought in after the end of the first year, for the same reason. For cells whose value is 3, no new entrants or reentrants are brought in after the end of the second year, and so on. For closed group runs the value for a cell is one larger than the number of future cohorts to be brought in.

In addition to the above timing logic, a “multiplier” is needed to determine the amount of entrants/reentrants to the Selected Reserve each year. None of these entrants/reentrants represent people entering the military for the first time; rather, they represent people transferring from active duty or people (veterans) reentering the Selected Reserves after a break in service, including members who were in the census at the beginning of the projection. The multiplier for closed group runs is set equal to the projected first year losses from the Selected Reserve. The assumption is that if new entrants to the military were included, roughly a constant population is maintained. The entrants are brought in to the Selected Reserve according to the entrant/reentrant distribution. For example, if the multiplier were 150,000, the number brought in to a Selected Reserve cell in a given year of the projection is  $(n_{ij} / 100,000) \times 150,000$ , where  $n_{ij}$  is the cell count for row  $i$  and column  $j$  of the entrant/reentrant distribution. Again, however, note that bringing in the entrants/reentrants is subject to the aforementioned timing table value restrictions in order to be consistent with closed-group requirements. For example, if the first-year losses were 150,000, the end-of-first-year entrants/reentrants would be approximately 109,000, determined using the  $(n_{ij} / 100,000) \times 150,000$  formula for every cell that has a value greater than 1 in the timing table. For each future year in the projection, the number of



entrants/reentrants would get progressively smaller, as fewer cells would qualify, based upon the corresponding value of the timing table.

The timing table is based on a data element in the Reserve file called DIEUS, date of initial entry to uniformed services. The values represented in the timing table cells are the average number of fiscal years (or partial fiscal years) between the DIEUS date and the date of the end of the fiscal year in which they entered (or reentered). For example, if the timing table were based on one fiscal year of data and all the cases in a cell had a DIEUS date that fell in the fiscal year being studied, the timing table value for that cell would be 1. If all the cases entered (according to DIEUS) in the fiscal year that preceded the fiscal year being studied, the timing table value for that cell would be 2. In reality, some of the people in a timing table cell may have entered in different fiscal years. However, for simulation purposes, we assume everyone in a particular cell of the timing table enters in the same fiscal year.

The promotion and merit increase scales (PAMS) give the expected annual percentage increase in pay independent of the across-the-board increases in the active duty pay scale. The PAMS do not include adjustments for inflation or productivity increases. The current PAMS are based on cross-sectional data obtained during fiscal years 1997-2000, and are listed on pages H-20 and H-21. They are defined by length of active service, by age, and by officer/enlisted status. The PAMS were computed by dividing the average pay at age  $(x+1)$  by the average pay at the age  $(x)$  for a given year of active service. Cells based on few observations were combined with other cells.

# Officer Selected Reserve Separation Rates \*

Completed Years Of Total Active Federal Military Service

Age	Under 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.046	0.217	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	0.046	0.217	0.113	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.046	0.217	0.113	0.105	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.119	0.217	0.113	0.105	0.122	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	0.183	0.217	0.113	0.105	0.122	0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	0.160	0.217	0.113	0.105	0.122	0.138	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	0.117	0.143	0.113	0.105	0.122	0.138	0.150	0.127	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.098	0.102	0.162	0.105	0.122	0.138	0.150	0.127	0.180	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	0.104	0.106	0.160	0.152	0.122	0.138	0.150	0.127	0.180	0.141	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	0.112	0.104	0.145	0.156	0.172	0.138	0.150	0.127	0.180	0.141	0.105	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.138	0.096	0.119	0.153	0.187	0.186	0.150	0.127	0.180	0.141	0.105	0.157	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.135	0.122	0.130	0.158	0.185	0.201	0.121	0.127	0.180	0.141	0.105	0.157	0.192	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.165	0.102	0.132	0.145	0.171	0.189	0.172	0.152	0.180	0.141	0.105	0.157	0.192	0.152	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	0.149	0.110	0.111	0.130	0.132	0.164	0.183	0.190	0.097	0.141	0.105	0.157	0.192	0.152	0.150	0.000	0.000	0.000	0.000	0.000	0.000
32	0.130	0.096	0.114	0.123	0.127	0.138	0.145	0.135	0.131	0.114	0.105	0.157	0.192	0.152	0.150	0.106	0.000	0.000	0.000	0.000	0.000
33	0.115	0.092	0.096	0.132	0.117	0.119	0.125	0.144	0.126	0.134	0.119	0.157	0.192	0.152	0.150	0.106	0.072	0.000	0.000	0.000	0.000
34	0.120	0.084	0.108	0.120	0.108	0.135	0.122	0.124	0.135	0.137	0.137	0.128	0.192	0.152	0.150	0.106	0.072	0.073	0.000	0.000	0.000
35	0.116	0.077	0.100	0.103	0.104	0.111	0.114	0.124	0.130	0.127	0.122	0.132	0.157	0.152	0.150	0.106	0.072	0.073	0.071	0.000	0.000
36	0.112	0.079	0.093	0.107	0.099	0.089	0.094	0.103	0.113	0.101	0.092	0.127	0.122	0.127	0.150	0.106	0.072	0.073	0.071	0.134	0.000
37	0.111	0.083	0.089	0.100	0.094	0.091	0.099	0.113	0.119	0.098	0.095	0.093	0.095	0.100	0.107	0.106	0.072	0.073	0.071	0.134	0.121
38	0.112	0.071	0.086	0.104	0.089	0.081	0.092	0.115	0.109	0.102	0.098	0.112	0.087	0.093	0.106	0.106	0.072	0.073	0.071	0.134	0.121
39	0.111	0.067	0.075	0.098	0.083	0.087	0.090	0.090	0.099	0.101	0.111	0.095	0.096	0.079	0.111	0.106	0.072	0.073	0.071	0.134	0.121
40	0.104	0.066	0.072	0.083	0.080	0.073	0.072	0.074	0.074	0.090	0.085	0.091	0.078	0.074	0.094	0.106	0.072	0.073	0.071	0.134	0.121
41	0.093	0.063	0.064	0.074	0.066	0.080	0.078	0.090	0.089	0.074	0.108	0.100	0.097	0.076	0.076	0.106	0.072	0.073	0.071	0.134	0.121
42	0.092	0.060	0.065	0.083	0.076	0.067	0.078	0.080	0.097	0.082	0.100	0.097	0.086	0.080	0.093	0.092	0.072	0.073	0.071	0.134	0.121
43	0.087	0.062	0.058	0.071	0.076	0.073	0.069	0.076	0.074	0.088	0.086	0.088	0.090	0.089	0.089	0.089	0.072	0.073	0.071	0.134	0.121
44	0.078	0.056	0.054	0.070	0.065	0.054	0.058	0.073	0.065	0.053	0.067	0.080	0.068	0.055	0.069	0.051	0.072	0.073	0.071	0.134	0.121
45	0.079	0.049	0.062	0.062	0.054	0.047	0.064	0.074	0.066	0.049	0.050	0.052	0.060	0.051	0.066	0.051	0.072	0.073	0.071	0.134	0.121
46	0.080	0.042	0.046	0.060	0.048	0.038	0.047	0.049	0.046	0.056	0.055	0.085	0.046	0.049	0.067	0.051	0.072	0.073	0.071	0.134	0.121
47	0.080	0.040	0.042	0.048	0.035	0.050	0.046	0.037	0.050	0.047	0.050	0.055	0.056	0.034	0.044	0.051	0.072	0.073	0.071	0.134	0.121
48	0.082	0.035	0.049	0.042	0.045	0.037	0.036	0.049	0.037	0.026	0.037	0.035	0.044	0.034	0.044	0.051	0.072	0.073	0.071	0.134	0.121
49	0.078	0.038	0.043	0.043	0.037	0.034	0.037	0.036	0.042	0.050	0.037	0.035	0.044	0.034	0.044	0.051	0.072	0.073	0.071	0.134	0.121
50	0.084	0.036	0.039	0.051	0.052	0.045	0.041	0.029	0.039	0.044	0.037	0.035	0.044	0.034	0.044	0.051	0.072	0.073	0.071	0.134	0.121
51	0.075	0.046	0.051	0.043	0.052	0.037	0.042	0.034	0.046	0.039	0.037	0.035	0.044	0.034	0.044	0.051	0.072	0.073	0.071	0.134	0.121
52	0.092	0.047	0.054	0.058	0.037	0.036	0.041	0.045	0.044	0.039	0.037	0.035	0.044	0.034	0.044	0.051	0.072	0.073	0.071	0.134	0.121
53	0.088	0.050	0.040	0.067	0.041	0.046	0.046	0.051	0.044	0.039	0.037	0.035	0.044	0.034	0.044	0.051	0.072	0.073	0.071	0.134	0.121
54	0.074	0.054	0.076	0.051	0.049	0.034	0.054	0.051	0.044	0.039	0.037	0.035	0.044	0.034	0.044	0.051	0.072	0.073	0.071	0.134	0.121
55	0.079	0.051	0.054	0.036	0.049	0.054	0.054	0.051	0.044	0.039	0.037	0.035	0.044	0.034	0.044	0.051	0.072	0.073	0.071	0.134	0.121
56	0.077	0.055	0.052	0.066	0.047	0.043	0.054	0.051	0.044	0.039	0.037	0.035	0.044	0.034	0.044	0.051	0.072	0.073	0.071	0.134	0.121
57	0.083	0.051	0.054	0.057	0.047	0.044	0.054	0.051	0.044	0.039	0.037	0.035	0.044	0.034	0.044	0.051	0.072	0.073	0.071	0.134	0.121
58	0.090	0.036	0.042	0.032	0.047	0.044	0.054	0.051	0.044	0.039	0.037	0.035	0.044	0.034	0.044	0.051	0.072	0.073	0.071	0.134	0.121
59	0.136	0.058	0.099	0.079	0.047	0.044	0.054	0.051	0.044	0.039	0.037	0.035	0.044	0.034	0.044	0.051	0.072	0.073	0.071	0.134	0.121
60	0.217	0.060	0.065	0.025	0.047	0.044	0.054	0.051	0.044	0.039	0.037	0.035	0.044	0.034	0.044	0.051	0.072	0.073	0.071	0.134	0.121
61	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106	0.106
62	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143
>62	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143

Note: Due to Section 647 of NDAA 2008 (P.L. 110-181) the rates shown above apply in the early years of the projection. See item 11 in the Reserve section in Appendix F for a description of the parameter used to model the phase-in to an average age 58 reserve retirement. As the transitions to earlier average retirement ages occur, the ages applicable to some of the rates change.

\* Includes separations due to all causes except loss to non-Selected Reserve status with 20 or more good years, or retirement.

# Enlisted Selected Reserve Separation Rates \*

Completed Years Of Total Active Federal Military Service

Age	Under 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	0.142	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.194	0.191	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	0.213	0.224	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.182	0.201	0.259	0.294	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.173	0.193	0.231	0.241	0.282	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	0.179	0.205	0.239	0.280	0.308	0.247	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	0.235	0.240	0.259	0.285	0.324	0.275	0.241	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	0.269	0.273	0.269	0.299	0.325	0.302	0.327	0.249	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.280	0.277	0.305	0.325	0.330	0.340	0.363	0.329	0.361	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	0.274	0.273	0.326	0.346	0.331	0.337	0.334	0.303	0.268	0.281	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	0.255	0.233	0.303	0.320	0.296	0.303	0.307	0.279	0.265	0.264	0.185	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.226	0.205	0.266	0.278	0.261	0.280	0.282	0.274	0.257	0.227	0.245	0.296	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.209	0.191	0.243	0.249	0.234	0.240	0.261	0.259	0.242	0.252	0.247	0.248	0.349	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.197	0.168	0.208	0.228	0.206	0.210	0.234	0.238	0.233	0.223	0.208	0.260	0.280	0.241	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	0.176	0.150	0.187	0.196	0.186	0.188	0.207	0.207	0.196	0.214	0.201	0.208	0.232	0.214	0.107	0.000	0.000	0.000	0.000	0.000	0.000
32	0.163	0.126	0.159	0.176	0.168	0.165	0.176	0.185	0.185	0.167	0.177	0.204	0.222	0.178	0.295	0.162	0.000	0.000	0.000	0.000	0.000
33	0.149	0.115	0.145	0.155	0.148	0.158	0.160	0.176	0.154	0.152	0.156	0.193	0.199	0.197	0.242	0.152	0.283	0.000	0.000	0.000	0.000
34	0.139	0.094	0.143	0.142	0.132	0.136	0.155	0.148	0.139	0.153	0.148	0.156	0.168	0.172	0.170	0.130	0.133	0.637	0.000	0.000	0.000
35	0.126	0.086	0.137	0.124	0.118	0.121	0.121	0.138	0.121	0.138	0.132	0.138	0.140	0.166	0.162	0.138	0.219	0.159	0.133	0.000	0.000
36	0.112	0.073	0.120	0.114	0.102	0.100	0.105	0.120	0.110	0.109	0.122	0.123	0.128	0.123	0.136	0.144	0.193	0.125	0.133	0.190	0.000
37	0.111	0.074	0.110	0.109	0.095	0.086	0.096	0.100	0.095	0.100	0.112	0.116	0.108	0.113	0.139	0.133	0.183	0.127	0.133	0.190	0.174
38	0.116	0.076	0.102	0.104	0.092	0.077	0.090	0.092	0.092	0.098	0.096	0.099	0.122	0.106	0.123	0.119	0.148	0.167	0.133	0.190	0.174
39	0.115	0.078	0.086	0.099	0.084	0.072	0.086	0.094	0.090	0.094	0.102	0.099	0.100	0.110	0.119	0.122	0.132	0.138	0.133	0.190	0.174
40	0.115	0.076	0.079	0.093	0.078	0.065	0.083	0.095	0.087	0.079	0.089	0.090	0.099	0.102	0.123	0.115	0.109	0.106	0.133	0.190	0.174
41	0.117	0.068	0.077	0.085	0.074	0.065	0.071	0.089	0.083	0.085	0.084	0.090	0.094	0.082	0.112	0.108	0.110	0.127	0.133	0.190	0.174
42	0.105	0.071	0.072	0.080	0.066	0.052	0.069	0.083	0.066	0.076	0.099	0.100	0.104	0.102	0.106	0.108	0.135	0.096	0.133	0.190	0.174
43	0.104	0.064	0.067	0.072	0.063	0.048	0.067	0.074	0.074	0.084	0.104	0.095	0.084	0.100	0.111	0.095	0.081	0.096	0.133	0.190	0.174
44	0.098	0.059	0.065	0.075	0.052	0.049	0.065	0.065	0.063	0.059	0.066	0.087	0.079	0.077	0.067	0.094	0.130	0.096	0.133	0.190	0.174
45	0.082	0.052	0.055	0.071	0.059	0.045	0.050	0.071	0.057	0.058	0.070	0.065	0.096	0.107	0.094	0.077	0.094	0.096	0.133	0.190	0.174
46	0.075	0.049	0.056	0.064	0.050	0.037	0.050	0.067	0.048	0.047	0.083	0.067	0.068	0.070	0.093	0.070	0.094	0.096	0.133	0.190	0.174
47	0.074	0.048	0.045	0.057	0.047	0.034	0.055	0.048	0.040	0.052	0.047	0.085	0.062	0.056	0.063	0.070	0.094	0.096	0.133	0.190	0.174
48	0.079	0.046	0.050	0.052	0.045	0.024	0.054	0.049	0.039	0.060	0.059	0.060	0.063	0.056	0.063	0.070	0.094	0.096	0.133	0.190	0.174
49	0.068	0.043	0.051	0.051	0.039	0.030	0.034	0.035	0.033	0.050	0.055	0.054	0.048	0.056	0.063	0.070	0.094	0.096	0.133	0.190	0.174
50	0.074	0.050	0.047	0.054	0.039	0.020	0.046	0.054	0.056	0.045	0.060	0.054	0.048	0.056	0.063	0.070	0.094	0.096	0.133	0.190	0.174
51	0.076	0.047	0.046	0.053	0.038	0.022	0.032	0.044	0.047	0.045	0.066	0.054	0.048	0.056	0.063	0.070	0.094	0.096	0.133	0.190	0.174
52	0.067	0.045	0.053	0.048	0.039	0.019	0.047	0.041	0.037	0.044	0.058	0.054	0.048	0.056	0.063	0.070	0.094	0.096	0.133	0.190	0.174
53	0.066	0.050	0.047	0.047	0.037	0.023	0.035	0.043	0.037	0.031	0.058	0.054	0.048	0.056	0.063	0.070	0.094	0.096	0.133	0.190	0.174
54	0.068	0.047	0.047	0.049	0.040	0.018	0.037	0.046	0.037	0.031	0.058	0.054	0.048	0.056	0.063	0.070	0.094	0.096	0.133	0.190	0.174
55	0.061	0.047	0.052	0.043	0.048	0.022	0.038	0.047	0.037	0.031	0.058	0.054	0.048	0.056	0.063	0.070	0.094	0.096	0.133	0.190	0.174
56	0.070	0.055	0.055	0.047	0.048	0.027	0.054	0.047	0.037	0.031	0.058	0.054	0.048	0.056	0.063	0.070	0.094	0.096	0.133	0.190	0.174
57	0.081	0.054	0.055	0.057	0.045	0.024	0.054	0.047	0.037	0.031	0.058	0.054	0.048	0.056	0.063	0.070	0.094	0.096	0.133	0.190	0.174
58	0.049	0.028	0.047	0.054	0.038	0.033	0.054	0.047	0.037	0.031	0.058	0.054	0.048	0.056	0.063	0.070	0.094	0.096	0.133	0.190	0.174
59	0.124	0.124	0.113	0.126	0.118	0.082	0.054	0.047	0.037	0.031	0.058	0.054	0.048	0.056	0.063	0.070	0.094	0.096	0.133	0.190	0.174
60	0.126	0.067	0.062	0.065	0.059	0.029	0.054	0.047	0.037	0.031	0.058	0.054	0.048	0.056	0.063	0.070	0.094	0.096	0.133	0.190	0.174
61	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143	0.143
62	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151
>62	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151

Note: Due to Section 647 of NDAA 2008 (P.L. 110-181) the rates shown above apply in the early years of the projection. See Item 11 in the Reserve section in Appendix F for a description of the parameter used to model the phase-in to an average age 58 reserve retirement. As the transitions to earlier average retirement ages occur, the ages applicable to some of the rates change.

\* Includes separations due to all causes except loss to non-Selected Reserve status with 20 or more good years, or retirement.

## Officer Selected Reserve Separation Rates \*

Completed Years Of Total Active Federal Military Service

Age	Under 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
37	0.000	0.003	0.005	0.005	0.004	0.006	0.006	0.003	0.012	0.006	0.011	0.009	0.017	0.036	0.010	0.090	0.105	0.098	0.107	0.082	0.100
38	0.001	0.003	0.005	0.005	0.004	0.006	0.006	0.013	0.013	0.006	0.011	0.009	0.017	0.036	0.010	0.090	0.105	0.098	0.107	0.082	0.100
39	0.002	0.011	0.005	0.005	0.017	0.020	0.006	0.010	0.019	0.006	0.011	0.009	0.017	0.036	0.010	0.090	0.105	0.098	0.107	0.082	0.100
40	0.006	0.017	0.007	0.005	0.019	0.018	0.006	0.019	0.020	0.021	0.011	0.009	0.017	0.036	0.010	0.090	0.105	0.098	0.107	0.082	0.100
41	0.004	0.018	0.027	0.016	0.022	0.029	0.016	0.033	0.026	0.027	0.020	0.027	0.034	0.036	0.010	0.090	0.105	0.098	0.107	0.082	0.100
42	0.005	0.017	0.031	0.029	0.026	0.042	0.030	0.035	0.049	0.043	0.031	0.027	0.041	0.039	0.035	0.090	0.105	0.098	0.107	0.082	0.100
43	0.004	0.025	0.047	0.032	0.044	0.060	0.067	0.065	0.064	0.079	0.065	0.056	0.050	0.057	0.057	0.090	0.105	0.098	0.107	0.082	0.100
44	0.007	0.037	0.046	0.037	0.043	0.059	0.073	0.086	0.088	0.093	0.080	0.060	0.066	0.072	0.068	0.090	0.105	0.098	0.107	0.082	0.100
45	0.009	0.033	0.045	0.036	0.051	0.058	0.083	0.084	0.095	0.097	0.086	0.098	0.103	0.084	0.115	0.090	0.105	0.098	0.107	0.082	0.100
46	0.012	0.049	0.048	0.052	0.060	0.069	0.075	0.098	0.067	0.074	0.096	0.083	0.093	0.091	0.109	0.090	0.105	0.098	0.107	0.082	0.100
47	0.012	0.059	0.061	0.044	0.061	0.060	0.070	0.089	0.096	0.062	0.072	0.105	0.088	0.066	0.097	0.090	0.105	0.098	0.107	0.082	0.100
48	0.019	0.074	0.061	0.056	0.071	0.076	0.079	0.093	0.087	0.095	0.107	0.091	0.074	0.107	0.097	0.090	0.105	0.098	0.107	0.082	0.100
49	0.019	0.107	0.085	0.096	0.101	0.115	0.119	0.130	0.144	0.117	0.138	0.088	0.126	0.151	0.125	0.090	0.105	0.098	0.107	0.082	0.100
50	0.027	0.116	0.120	0.101	0.127	0.137	0.135	0.154	0.140	0.137	0.190	0.159	0.145	0.168	0.150	0.090	0.105	0.098	0.107	0.082	0.100
51	0.017	0.110	0.117	0.113	0.128	0.153	0.163	0.142	0.172	0.137	0.151	0.184	0.191	0.182	0.188	0.090	0.105	0.098	0.107	0.082	0.100
52	0.027	0.100	0.123	0.097	0.156	0.142	0.173	0.189	0.185	0.133	0.194	0.205	0.205	0.207	0.231	0.090	0.105	0.098	0.107	0.082	0.100
53	0.026	0.096	0.105	0.113	0.156	0.153	0.164	0.181	0.180	0.170	0.182	0.187	0.184	0.196	0.098	0.090	0.105	0.098	0.107	0.082	0.100
54	0.018	0.083	0.109	0.109	0.141	0.150	0.169	0.204	0.133	0.206	0.222	0.255	0.238	0.255	0.200	0.090	0.105	0.098	0.107	0.082	0.100
55	0.036	0.102	0.116	0.106	0.112	0.176	0.143	0.232	0.181	0.234	0.207	0.215	0.239	0.385	0.082	0.090	0.105	0.098	0.107	0.082	0.100
56	0.028	0.069	0.102	0.109	0.123	0.112	0.149	0.139	0.146	0.064	0.064	0.064	0.064	0.064	0.082	0.090	0.105	0.098	0.107	0.082	0.100
57	0.027	0.089	0.101	0.080	0.085	0.151	0.143	0.108	0.137	0.064	0.064	0.064	0.064	0.064	0.082	0.090	0.105	0.098	0.107	0.082	0.100
58	0.028	0.066	0.097	0.083	0.085	0.120	0.167	0.149	0.140	0.064	0.064	0.064	0.064	0.064	0.082	0.090	0.105	0.098	0.107	0.082	0.100
59	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.064	0.064	0.064	0.064	0.064	0.082	0.090	0.105	0.098	0.107	0.082	0.100
60	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
61	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
62	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
>62	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006

Note: Due to Section 647 of NDAA 2008 (P.L. 110-181) the rates shown above apply in the early years of the projection. See Item 11 in the Reserve section in Appendix F for a description of the parameter used to model the phase-in to an average age 58 reserve retirement. As the transitions to earlier average retirement ages occur, the ages applicable to some of the rates change.

\* Includes separations to non-Selected Reserves with 20 or more good years.

## Enlisted Selected Reserve Separation Rates \*

Completed Years Of Total Active Federal Military Service

Age	Under 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
37	0.001	0.007	0.005	0.002	0.004	0.005	0.004	0.006	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004
38	0.005	0.023	0.011	0.011	0.014	0.013	0.018	0.011	0.020	0.020	0.021	0.018	0.022	0.016	0.009	0.009	0.009	0.009	0.009	0.009	0.009
39	0.009	0.033	0.032	0.024	0.023	0.037	0.032	0.030	0.036	0.037	0.036	0.033	0.039	0.043	0.022	0.018	0.018	0.018	0.018	0.018	0.018
40	0.010	0.041	0.034	0.033	0.032	0.045	0.047	0.039	0.049	0.049	0.050	0.047	0.043	0.042	0.052	0.035	0.041	0.018	0.018	0.018	0.018
41	0.014	0.044	0.048	0.042	0.043	0.050	0.042	0.056	0.051	0.052	0.062	0.059	0.052	0.059	0.055	0.060	0.049	0.023	0.023	0.023	0.023
42	0.010	0.043	0.042	0.052	0.052	0.047	0.045	0.048	0.056	0.065	0.055	0.053	0.058	0.070	0.073	0.068	0.047	0.047	0.047	0.047	0.047
43	0.015	0.045	0.048	0.052	0.052	0.061	0.056	0.054	0.074	0.074	0.082	0.072	0.062	0.071	0.063	0.060	0.054	0.054	0.054	0.054	0.054
44	0.019	0.054	0.056	0.055	0.059	0.066	0.066	0.068	0.079	0.085	0.102	0.074	0.083	0.069	0.097	0.069	0.069	0.069	0.069	0.069	0.069
45	0.022	0.057	0.058	0.064	0.064	0.066	0.061	0.067	0.082	0.076	0.097	0.094	0.076	0.078	0.075	0.075	0.075	0.075	0.075	0.075	0.075
46	0.025	0.063	0.068	0.069	0.068	0.075	0.077	0.075	0.079	0.101	0.109	0.112	0.085	0.073	0.078	0.078	0.078	0.078	0.078	0.078	0.078
47	0.024	0.065	0.072	0.074	0.072	0.073	0.067	0.070	0.089	0.119	0.081	0.090	0.096	0.101	0.093	0.093	0.093	0.093	0.093	0.093	0.093
48	0.023	0.070	0.070	0.071	0.077	0.085	0.073	0.076	0.096	0.098	0.118	0.095	0.117	0.133	0.112	0.112	0.112	0.112	0.112	0.112	0.112
49	0.032	0.076	0.074	0.081	0.085	0.073	0.070	0.083	0.091	0.104	0.084	0.093	0.124	0.104	0.105	0.105	0.105	0.105	0.105	0.105	0.105
50	0.035	0.079	0.076	0.081	0.080	0.075	0.070	0.084	0.099	0.096	0.116	0.116	0.123	0.109	0.109	0.109	0.109	0.109	0.109	0.109	0.109
51	0.036	0.079	0.082	0.082	0.089	0.080	0.079	0.083	0.087	0.107	0.092	0.097	0.106	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090
52	0.039	0.085	0.080	0.088	0.096	0.102	0.091	0.106	0.119	0.107	0.112	0.132	0.149	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096
53	0.036	0.080	0.082	0.089	0.095	0.097	0.115	0.104	0.102	0.134	0.092	0.162	0.113	0.113	0.113	0.113	0.113	0.113	0.113	0.113	0.113
54	0.050	0.097	0.107	0.094	0.102	0.122	0.114	0.134	0.141	0.172	0.119	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151	0.151
55	0.058	0.107	0.121	0.115	0.112	0.179	0.185	0.154	0.170	0.169	0.169	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
56	0.063	0.109	0.113	0.109	0.126	0.139	0.111	0.129	0.153	0.170	0.135	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176
57	0.055	0.114	0.134	0.107	0.126	0.152	0.116	0.131	0.149	0.149	0.122	0.199	0.199	0.199	0.199	0.199	0.199	0.199	0.199	0.199	0.199
58	0.082	0.113	0.130	0.119	0.134	0.157	0.135	0.122	0.174	0.185	0.236	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.160	0.160
59	0.033	0.082	0.067	0.085	0.092	0.119	0.119	0.086	0.133	0.094	0.107	0.102	0.102	0.102	0.102	0.102	0.102	0.102	0.102	0.102	0.102
60	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004
61	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004
62	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004
>62	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004

Note: Due to Section 647 of NDAA 2008 (P.L. 110-181) the rates shown above apply in the early years of the projection. See Item 11 in the Reserve section in Appendix F for a description of the parameter used to model the phase-in to an average age 58 reserve retirement. As the transitions to earlier average retirement ages occur, the ages applicable to some of the rates change.

# Officer Non-Selected Reserve with 20 Good Years Separation Rates \*

Completed Years Of Total Active Federal Military Service

Age	Under 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
37	0.318	0.206	0.164	0.153	0.143	0.063	0.043	0.026	0.022	0.104	0.071	0.051	0.084	0.078	0.049	0.047	0.025	0.180	0.032	0.043	0.028
38	0.318	0.206	0.164	0.153	0.143	0.063	0.043	0.026	0.022	0.104	0.071	0.051	0.084	0.078	0.049	0.047	0.025	0.180	0.032	0.043	0.028
39	0.318	0.206	0.164	0.153	0.143	0.063	0.043	0.026	0.022	0.104	0.071	0.051	0.084	0.078	0.049	0.047	0.025	0.180	0.032	0.043	0.028
40	0.318	0.106	0.164	0.153	0.136	0.063	0.043	0.026	0.022	0.104	0.071	0.051	0.084	0.078	0.049	0.047	0.025	0.180	0.032	0.043	0.028
41	0.220	0.069	0.164	0.097	0.105	0.063	0.077	0.026	0.022	0.085	0.119	0.051	0.084	0.078	0.049	0.047	0.025	0.180	0.032	0.043	0.028
42	0.127	0.105	0.095	0.096	0.073	0.046	0.061	0.046	0.032	0.044	0.096	0.051	0.084	0.078	0.049	0.047	0.025	0.180	0.032	0.043	0.028
43	0.127	0.063	0.066	0.087	0.048	0.045	0.044	0.040	0.043	0.041	0.072	0.053	0.048	0.078	0.049	0.047	0.025	0.180	0.032	0.043	0.028
44	0.154	0.078	0.029	0.048	0.064	0.033	0.046	0.035	0.049	0.044	0.021	0.035	0.047	0.062	0.104	0.047	0.025	0.180	0.032	0.043	0.028
45	0.061	0.051	0.077	0.076	0.058	0.040	0.035	0.035	0.040	0.049	0.028	0.028	0.028	0.051	0.084	0.047	0.025	0.180	0.032	0.043	0.028
46	0.141	0.052	0.046	0.041	0.048	0.032	0.041	0.017	0.032	0.032	0.036	0.040	0.029	0.041	0.064	0.047	0.025	0.151	0.032	0.043	0.028
47	0.097	0.045	0.049	0.058	0.040	0.029	0.032	0.033	0.031	0.019	0.018	0.021	0.039	0.036	0.056	0.056	0.025	0.027	0.032	0.043	0.028
48	0.072	0.035	0.059	0.042	0.034	0.022	0.022	0.015	0.015	0.020	0.014	0.034	0.049	0.026	0.047	0.053	0.025	0.027	0.032	0.043	0.028
49	0.069	0.031	0.036	0.034	0.025	0.027	0.021	0.012	0.029	0.014	0.010	0.020	0.016	0.021	0.043	0.014	0.025	0.027	0.032	0.043	0.028
50	0.047	0.024	0.027	0.030	0.026	0.016	0.023	0.016	0.021	0.014	0.011	0.011	0.015	0.021	0.039	0.014	0.025	0.027	0.032	0.043	0.028
51	0.055	0.021	0.031	0.028	0.024	0.019	0.013	0.012	0.012	0.014	0.012	0.010	0.013	0.009	0.011	0.014	0.025	0.027	0.032	0.043	0.028
52	0.047	0.014	0.021	0.015	0.021	0.012	0.010	0.008	0.018	0.012	0.008	0.011	0.012	0.009	0.011	0.014	0.025	0.027	0.032	0.043	0.028
53	0.038	0.023	0.020	0.016	0.012	0.013	0.011	0.011	0.010	0.013	0.008	0.010	0.005	0.009	0.011	0.014	0.025	0.027	0.032	0.043	0.028
54	0.032	0.026	0.014	0.011	0.010	0.008	0.008	0.008	0.010	0.012	0.009	0.008	0.005	0.009	0.011	0.014	0.025	0.027	0.032	0.043	0.028
55	0.044	0.024	0.020	0.012	0.013	0.011	0.007	0.009	0.007	0.012	0.011	0.007	0.005	0.009	0.011	0.014	0.025	0.027	0.032	0.043	0.028
56	0.020	0.023	0.014	0.009	0.006	0.011	0.007	0.009	0.007	0.017	0.011	0.006	0.005	0.009	0.011	0.014	0.025	0.027	0.032	0.043	0.028
57	0.029	0.014	0.011	0.012	0.006	0.008	0.009	0.010	0.007	0.011	0.012	0.006	0.005	0.009	0.011	0.024	0.025	0.027	0.032	0.043	0.028
58	0.031	0.018	0.014	0.007	0.008	0.010	0.007	0.008	0.010	0.011	0.048	0.006	0.005	0.009	0.023	0.021	0.025	0.027	0.032	0.043	0.028
59	0.157	0.108	0.124	0.110	0.090	0.091	0.083	0.077	0.074	0.088	0.084	0.081	0.114	0.099	0.105	0.098	0.064	0.080	0.174	0.043	0.028
60	0.077	0.083	0.045	0.036	0.016	0.019	0.161	0.023	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017
61	0.266	0.338	0.347	0.296	0.191	0.239	0.239	0.239	0.239	0.239	0.239	0.239	0.239	0.239	0.239	0.239	0.239	0.239	0.239	0.239	0.239
62	0.266	0.477	0.327	0.376	0.205	0.216	0.216	0.216	0.216	0.216	0.216	0.216	0.216	0.216	0.216	0.216	0.216	0.216	0.216	0.216	0.216
>62	0.455	0.460	0.470	0.318	0.219	0.267	0.241	0.241	0.241	0.241	0.241	0.241	0.241	0.241	0.241	0.241	0.241	0.241	0.241	0.241	0.241

Note: Due to Section 647 of NDAA 2008 (P.L. 110-181) the rates shown above apply in the early years of the projection. See Item 11 in the Reserve section in Appendix F for a description of the parameter used to model the phase-in to an average age 58 reserve retirement. As the transitions to earlier average retirement ages occur, the ages applicable to some of the rates change.

\* Includes separations from non-Selected Reserves with 20 or more good years, except for paid retirement.

## Enlisted Non-Selected Reserve with 20 Good Years Separation Rates \*

Completed Years Of Total Active Federal Military Service

Age	Under 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
37	0.165	0.174	0.144	0.274	0.172	0.057	0.112	0.066	0.039	0.086	0.031	0.072	0.044	0.069	0.062	0.194	0.052	0.069	0.122	0.185	0.130
38	0.175	0.123	0.144	0.246	0.113	0.057	0.168	0.066	0.039	0.086	0.031	0.072	0.044	0.069	0.062	0.194	0.052	0.069	0.122	0.185	0.130
39	0.182	0.104	0.103	0.090	0.055	0.057	0.110	0.111	0.082	0.086	0.031	0.072	0.044	0.069	0.062	0.194	0.052	0.069	0.122	0.185	0.130
40	0.175	0.072	0.050	0.095	0.071	0.049	0.052	0.068	0.054	0.050	0.031	0.072	0.044	0.069	0.062	0.215	0.052	0.069	0.122	0.185	0.130
41	0.103	0.070	0.047	0.094	0.051	0.044	0.031	0.034	0.027	0.043	0.033	0.041	0.044	0.062	0.062	0.174	0.052	0.069	0.122	0.185	0.130
42	0.099	0.062	0.044	0.066	0.042	0.038	0.034	0.038	0.030	0.037	0.046	0.036	0.044	0.054	0.062	0.038	0.052	0.069	0.122	0.185	0.130
43	0.101	0.051	0.034	0.056	0.036	0.023	0.029	0.040	0.035	0.030	0.020	0.036	0.043	0.050	0.062	0.038	0.052	0.069	0.122	0.185	0.130
44	0.078	0.040	0.033	0.047	0.031	0.024	0.032	0.047	0.036	0.029	0.020	0.032	0.033	0.042	0.064	0.038	0.052	0.069	0.122	0.185	0.130
45	0.054	0.032	0.037	0.045	0.024	0.027	0.036	0.024	0.028	0.026	0.019	0.026	0.026	0.043	0.064	0.038	0.052	0.069	0.122	0.185	0.130
46	0.047	0.025	0.027	0.043	0.021	0.016	0.023	0.027	0.014	0.014	0.026	0.034	0.022	0.053	0.065	0.080	0.052	0.069	0.122	0.185	0.130
47	0.049	0.023	0.035	0.037	0.025	0.026	0.024	0.024	0.013	0.022	0.010	0.035	0.019	0.029	0.057	0.028	0.052	0.069	0.122	0.185	0.130
48	0.048	0.020	0.034	0.038	0.019	0.019	0.028	0.014	0.010	0.017	0.012	0.017	0.020	0.062	0.047	0.028	0.052	0.069	0.122	0.185	0.130
49	0.053	0.016	0.031	0.033	0.021	0.015	0.028	0.021	0.018	0.014	0.017	0.018	0.024	0.045	0.040	0.028	0.052	0.069	0.122	0.185	0.130
50	0.033	0.016	0.031	0.028	0.016	0.015	0.020	0.018	0.018	0.016	0.020	0.019	0.020	0.045	0.034	0.028	0.052	0.069	0.122	0.185	0.130
51	0.038	0.021	0.025	0.029	0.019	0.016	0.024	0.022	0.019	0.014	0.023	0.020	0.014	0.027	0.016	0.028	0.052	0.069	0.122	0.185	0.130
52	0.044	0.017	0.027	0.030	0.018	0.014	0.017	0.020	0.010	0.010	0.012	0.017	0.020	0.031	0.016	0.052	0.052	0.069	0.122	0.185	0.130
53	0.042	0.022	0.025	0.027	0.012	0.011	0.023	0.020	0.015	0.022	0.021	0.014	0.013	0.034	0.016	0.022	0.052	0.069	0.122	0.185	0.130
54	0.048	0.019	0.021	0.032	0.017	0.012	0.014	0.016	0.014	0.013	0.020	0.019	0.016	0.023	0.016	0.022	0.052	0.069	0.122	0.185	0.130
55	0.046	0.024	0.022	0.027	0.016	0.014	0.015	0.022	0.010	0.019	0.023	0.021	0.027	0.022	0.016	0.022	0.052	0.069	0.122	0.185	0.130
56	0.044	0.024	0.023	0.030	0.016	0.009	0.013	0.019	0.014	0.012	0.023	0.025	0.025	0.029	0.016	0.022	0.052	0.069	0.122	0.185	0.130
57	0.033	0.026	0.022	0.024	0.015	0.012	0.014	0.022	0.007	0.022	0.026	0.019	0.024	0.027	0.029	0.038	0.052	0.069	0.122	0.185	0.130
58	0.030	0.035	0.028	0.027	0.018	0.010	0.013	0.018	0.012	0.015	0.031	0.013	0.026	0.026	0.066	0.091	0.052	0.069	0.122	0.185	0.130
59	0.145	0.133	0.120	0.120	0.096	0.083	0.099	0.098	0.107	0.093	0.076	0.130	0.093	0.143	0.102	0.143	0.109	0.069	0.122	0.185	0.130
60	0.077	0.065	0.059	0.048	0.022	0.021	0.039	0.034	0.029	0.030	0.025	0.028	0.035	0.046	0.233	0.074	0.100	0.100	0.100	0.100	0.100
61	0.314	0.358	0.209	0.263	0.184	0.176	0.352	0.415	0.456	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365
62	0.396	0.392	0.415	0.349	0.242	0.215	0.355	0.355	0.355	0.355	0.355	0.355	0.355	0.355	0.355	0.355	0.355	0.355	0.355	0.355	0.355
>62	0.437	0.521	0.419	0.477	0.221	0.121	0.253	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350

Note: Due to Section 647 of NDAA 2008 (P.L. 110-181) the rates shown above apply in the early years of the projection. See Item 11 in the Reserve section in Appendix F for a description of the parameter used to model the phase-in to an average age 58 reserve retirement. As the transitions to earlier average retirement ages occur, the ages applicable to some of the rates change.

\* Includes separations from non-Selected Reserves with 20 or more good years, except for paid retirement.

## Officer Selected Reserve Nondisability Retirement Rates

Completed Years Of Total Active Federal Military Service

Age	Under 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
59	0.203	0.220	0.243	0.264	0.281	0.296	0.308	0.317	0.323	0.327	0.328	0.326	0.321	0.313	0.303	0.289	0.273	0.254	0.233	0.208	0.181
60	0.473	0.570	0.605	0.631	0.653	0.672	0.690	0.706	0.721	0.735	0.749	0.762	0.774	0.785	0.797	0.807	0.818	0.828	0.838	0.848	0.857
61	0.139	0.159	0.202	0.226	0.240	0.249	0.252	0.253	0.250	0.246	0.239	0.231	0.222	0.211	0.200	0.187	0.174	0.160	0.145	0.130	0.114
62	0.081	0.126	0.178	0.217	0.251	0.281	0.308	0.332	0.355	0.377	0.397	0.416	0.435	0.453	0.470	0.486	0.502	0.518	0.533	0.547	0.561
>62	0.108	0.116	0.163	0.200	0.231	0.258	0.283	0.306	0.327	0.347	0.365	0.383	0.400	0.417	0.432	0.447	0.462	0.476	0.490	0.504	0.517

## Enlisted Selected Reserve Nondisability Retirement Rates

Completed Years Of Total Active Federal Military Service

Age	Under 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
59	0.251	0.276	0.282	0.288	0.294	0.300	0.306	0.312	0.319	0.325	0.331	0.337	0.343	0.349	0.355	0.361	0.367	0.373	0.379	0.385	0.391
60	0.758	0.837	0.852	0.863	0.873	0.881	0.889	0.896	0.902	0.908	0.914	0.919	0.924	0.929	0.934	0.939	1.000	1.000	1.000	1.000	1.000
61	0.443	0.443	0.443	0.443	0.443	0.443	0.443	0.443	0.443	0.443	0.443	0.443	0.443	0.443	0.443	0.443	0.443	0.443	0.443	0.443	0.443
62	0.522	0.522	0.522	0.522	0.522	0.522	0.522	0.522	0.522	0.522	0.522	0.522	0.522	0.522	0.522	0.522	0.522	0.522	0.522	0.522	0.522
>62	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209

Note: Due to Section 647 of NDAA 2008 (P.L. 110-181) both rates shown above apply in the early years of the projection. See Item 11 in the Reserve section in Appendix F for a description of the parameter used to model the phase-in to an average age 58 reserve retirement. As the transitions to earlier average retirement ages occur, the ages applicable to some of the rates change.



## Officer Non-Selected Reserve with 20 Good Years Nondisability Retirement Rates

Completed Years Of Total Active Federal Military Service

Age	Under 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
59	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378
60	0.935	0.935	0.935	0.935	0.935	0.935	0.935	0.935	0.935	0.935	0.935	0.935	0.935	0.935	0.935	0.935	0.935	0.935	0.935	0.935	0.935
61	0.294	0.294	0.294	0.294	0.294	0.294	0.294	0.294	0.294	0.294	0.294	0.294	0.294	0.294	0.294	0.294	0.294	0.294	0.294	0.294	0.294
62	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192
>62	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121

## Enlisted Non-Selected Reserve with 20 Good Years Nondisability Retirement Rates

Completed Years Of Total Active Federal Military Service

Age	Under 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
59	0.364	0.375	0.379	0.383	0.385	0.388	0.390	0.396	0.398	0.400	0.401	0.403	0.404	0.406	0.410	0.411	0.412	0.409	0.410	0.411	0.412
60	0.921	0.921	0.921	0.921	0.921	0.921	0.921	0.921	0.921	0.921	0.921	0.921	0.921	0.921	0.921	0.921	0.921	0.921	0.921	0.921	0.921
61	0.275	0.275	0.275	0.275	0.275	0.275	0.275	0.275	0.275	0.275	0.275	0.275	0.275	0.275	0.275	0.275	0.275	0.275	0.275	0.275	0.275
62	0.133	0.133	0.133	0.133	0.133	0.133	0.133	0.133	0.133	0.133	0.133	0.133	0.133	0.133	0.133	0.133	0.133	0.133	0.133	0.133	0.133
>62	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084	0.084

Note: Due to Section 647 of NDAA 2008 (P.L. 110-181) both rates shown above apply in the early years of the projection. See Item 11 in the Reserve section in Appendix F for a description of the parameter used to model the phase-in to an average age 58 reserve retirement. As the transitions to earlier average retirement ages occur, the ages applicable to some of the rates change.

## Officer Selected Reserve Column-Transfer Rates \*

Completed Years Of Total Active Federal Military Service

[illegible]

## Enlisted Selected Reserve Column-Transfer Rates \*

Completed Years Of Total Active Federal Military Service

[illegible]

# Officer Selected Reserve New Entrant Rates \*

Completed Years Of Total Active Federal Military Service

Age	Under 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	27	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	63	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	75	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	122	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	162	12	12	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	153	20	42	11	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	156	23	52	42	21	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	179	29	45	53	69	23	5	1	1	1	0	0	0	0	0	0	0	0	0	0	0
28	203	43	41	56	97	53	12	5	2	2	1	0	0	0	0	0	0	0	0	0	0
29	222	39	35	54	83	73	52	15	5	2	3	1	1	0	0	0	0	0	0	0	0
30	213	47	33	56	81	64	66	54	15	5	5	3	1	0	0	0	0	0	0	0	0
31	177	50	33	54	77	43	48	70	52	36	7	3	3	1	1	0	0	0	0	0	0
32	153	55	26	56	77	43	42	50	81	115	26	3	3	3	2	0	0	0	0	0	0
33	134	46	24	52	72	41	35	42	61	142	87	20	5	3	1	1	2	0	0	0	0
34	136	48	28	52	68	35	39	34	47	92	89	60	14	5	5	1	1	1	0	0	0
35	123	50	25	42	57	39	37	37	43	65	66	79	51	9	6	2	0	1	0	0	0
36	95	37	16	32	43	33	33	33	39	53	46	65	56	27	16	2	1	1	1	1	0
37	84	30	17	21	32	23	25	25	32	35	44	44	37	29	44	7	2	1	0	0	0
38	57	26	10	20	26	16	21	20	23	24	30	42	32	18	37	15	5	2	1	0	0
39	54	18	8	23	27	17	18	17	21	20	26	34	26	17	21	14	9	3	1	0	0
40	52	16	3	18	20	17	18	16	15	16	20	28	21	14	10	11	5	2	0	0	1
41	34	19	7	17	23	15	16	17	17	16	21	25	18	15	12	6	2	3	1	1	0
42	35	11	7	11	24	17	11	15	14	14	14	18	14	12	8	8	3	1	1	1	1
43	27	8	8	14	15	16	11	10	11	11	11	15	15	9	10	3	2	2	1	1	1
44	21	10	6	15	15	10	11	11	9	8	11	14	9	7	9	5	3	1	0	0	1
45	25	10	6	11	15	8	7	7	10	10	7	10	9	7	7	3	3	1	0	1	1
46	20	8	5	10	14	8	10	7	8	6	7	6	8	7	3	3	2	1	1	0	0
47	19	8	8	11	11	7	6	6	3	5	5	6	3	2	5	2	1	0	1	0	0
48	16	7	5	9	8	6	5	6	5	3	1	5	3	2	3	1	1	0	1	1	1
49	16	8	6	9	7	5	2	2	3	5	5	3	5	2	1	1	2	1	0	1	1
50	14	6	5	7	7	3	3	5	5	3	3	3	2	3	1	2	0	1	1	0	0
51	10	5	5	6	6	5	2	2	3	2	1	2	2	2	1	2	1	0	1	0	1
52	9	5	5	5	3	3	2	2	2	2	2	2	1	1	1	1	1	1	0	0	1
53	8	3	5	3	5	2	2	3	1	1	1	2	1	0	1	1	0	0	1	1	1
54	7	2	1	2	2	2	2	1	1	1	1	1	0	1	1	0	0	0	0	0	0
55	6	2	0	2	1	1	1	1	2	0	0	0	0	0	1	0	0	0	0	0	0
56	3	1	1	2	1	1	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0
57	2	1	0	0	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
58	5	1	1	2	1	1	1	1	0	0	1	0	1	1	0	0	0	0	0	0	0

# Enlisted Selected Reserve New Entrant Rates \*

Completed Years Of Total Active Federal Military Service

Age	Under 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	1,346	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	10,929	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	9,492	21	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	5,812	55	32	76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	3,291	115	520	489	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	1,840	145	688	1,270	484	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	1,353	159	454	1,403	1,608	69	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	1,074	153	389	1,100	1,976	300	56	2	0	0	0	0	0	0	0	0	0	0	0	0	0
25	1,007	169	355	832	1,517	434	314	28	3	0	0	0	0	0	0	0	0	0	0	0	0
26	951	172	316	683	1,177	375	476	239	26	1	0	0	0	0	0	0	0	0	0	0	0
27	841	173	265	571	984	301	417	406	178	22	1	0	0	0	0	0	0	0	0	0	0
28	759	154	212	509	783	233	318	328	265	138	45	3	0	0	0	0	0	0	0	0	0
29	697	151	174	406	645	201	248	260	206	235	188	16	2	0	0	0	0	0	0	0	0
30	585	126	150	322	521	173	193	197	158	190	260	73	10	1	0	0	0	0	0	0	0
31	502	99	112	291	412	146	171	155	135	151	215	108	53	11	2	0	0	0	0	0	0
32	433	99	105	239	354	130	136	135	110	116	159	86	74	49	9	2	0	0	0	0	0
33	400	89	94	213	286	106	117	111	95	93	141	67	72	61	37	22	2	0	0	0	0
34	369	76	88	191	242	90	107	98	94	98	111	67	60	57	47	68	4	1	0	0	0
35	362	75	71	183	220	76	94	92	83	86	111	65	60	46	50	78	12	2	1	0	0
36	309	66	62	156	185	72	72	72	67	69	98	63	55	44	44	56	12	5	1	0	0
37	240	61	55	141	169	56	70	64	53	60	79	45	52	40	35	40	11	5	2	1	0
38	197	61	40	125	126	46	57	46	48	43	58	45	34	37	33	30	12	6	6	0	0
39	165	39	33	101	105	41	39	37	35	30	42	33	35	30	26	27	7	4	3	0	0
40	131	35	27	85	91	37	38	26	31	26	32	24	24	26	24	27	12	5	3	2	1
41	115	34	25	71	78	24	31	23	24	24	29	22	19	18	20	18	7	6	2	1	2
42	93	28	25	61	64	23	27	24	20	17	21	14	13	15	12	14	6	4	2	2	1
43	81	23	22	55	53	21	23	19	15	14	18	12	14	12	8	10	6	4	1	3	1
44	57	21	23	40	42	17	18	14	13	14	13	10	9	6	8	8	6	3	1	1	2
45	46	21	21	37	35	13	15	11	10	7	12	11	9	7	8	7	4	3	1	1	0
46	35	16	17	27	28	11	12	8	8	7	6	6	6	4	5	5	3	3	0	0	2
47	33	15	16	19	20	6	9	5	7	6	6	6	6	4	3	6	3	2	2	1	0
48	27	14	15	16	20	7	7	7	5	5	4	3	5	3	2	2	2	1	1	0	0
49	22	13	16	13	12	7	6	4	5	5	3	4	4	4	3	3	2	2	1	1	0
50	18	11	14	16	14	6	4	5	6	4	3	2	6	2	1	4	1	1	1	0	1
51	12	11	12	17	11	5	3	3	4	2	3	2	2	1	2	1	1	1	0	0	0
52	9	9	11	12	11	5	4	3	2	1	2	2	2	2	1	0	1	0	1	1	1
53	6	6	9	9	9	3	2	2	2	1	3	1	2	1	1	1	0	2	0	0	0
54	9	3	7	8	5	2	1	1	1	1	2	1	1	1	1	1	1	0	0	0	0
55	3	2	5	7	4	1	1	1	1	1	1	1	0	1	1	1	1	0	0	0	0
56	4	2	3	3	3	1	1	1	1	1	1	0	0	1	1	0	0	1	0	0	1
57	3	1	1	3	3	2	1	0	1	0	0	1	1	0	0	0	1	1	0	0	0
58	5	2	5	5	5	1	2	1	0	0	0	1	0	0	1	2	0	1	1	1	0

\* Rates per 100,000 reservists in the new entrant/reentrant distribution.

# Officer Selected Reserve Timing Table

Completed Years Of Total Active Federal Military Service

Age	Under 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	3	3	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	3	3	4	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	4	4	4	5	5	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	4	4	5	5	6	6	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	5	6	5	5	6	7	7	8	0	0	0	0	0	0	0	0	0	0	0	0	0
25	5	6	5	6	6	7	7	8	9	0	0	0	0	0	0	0	0	0	0	0	0
26	6	7	6	7	7	7	8	8	9	10	0	0	0	0	0	0	0	0	0	0	0
27	6	8	7	7	8	7	8	9	9	10	11	0	0	0	0	0	0	0	0	0	0
28	7	9	8	8	9	8	9	9	10	10	11	12	0	0	0	0	0	0	0	0	0
29	8	10	9	9	9	9	9	10	10	10	11	12	13	0	0	0	0	0	0	0	0
30	9	11	10	10	9	9	9	10	11	10	11	13	13	14	0	0	0	0	0	0	0
31	9	12	11	10	10	10	11	10	11	11	11	13	13	14	15	0	0	0	0	0	0
32	10	12	12	11	11	11	11	11	11	11	12	13	14	14	15	16	0	0	0	0	0
33	10	13	13	12	12	11	12	12	12	12	12	14	14	15	16	16	15	0	0	0	0
34	11	14	13	13	13	12	13	13	12	12	13	14	15	15	16	16	16	16	0	0	0
35	12	14	14	13	14	13	14	13	14	13	13	14	15	16	17	17	16	17	17	0	0
36	13	15	14	13	14	14	14	14	14	13	14	14	15	16	16	17	17	17	18	18	0
37	14	16	16	15	15	15	15	14	15	14	14	15	15	16	16	17	17	18	18	19	19
38	13	16	16	15	16	15	15	16	16	15	15	16	16	17	17	17	18	18	19	19	20
39	14	16	16	17	17	16	16	17	17	17	16	16	17	16	17	18	19	19	20	20	20
40	14	16	17	17	18	18	17	17	17	17	18	17	17	17	18	18	19	20	21	21	21
41	15	17	18	17	19	18	19	18	19	17	18	18	19	19	18	20	20	21	21	21	22
42	16	17	18	20	20	19	18	18	20	19	18	19	20	20	19	20	21	21	22	22	22
43	14	16	20	18	21	20	21	19	19	19	20	20	20	20	21	21	22	22	22	23	23
44	16	19	19	21	20	20	21	21	21	21	21	20	21	20	21	21	22	23	23	23	24
45	15	19	21	23	21	22	21	23	21	20	22	21	21	22	22	21	23	24	24	24	25
46	17	20	23	23	22	23	23	22	22	22	21	19	21	22	23	24	24	24	25	25	25
47	17	21	25	25	23	22	22	22	25	20	22	22	24	23	24	25	25	25	26	26	26
48	18	25	23	23	24	22	24	23	24	24	24	24	24	24	25	26	26	26	27	27	27
49	18	26	27	24	26	26	26	24	25	25	25	25	25	24	26	27	27	27	28	28	28
50	19	27	28	28	29	26	26	24	26	27	27	27	27	25	26	28	27	28	28	29	29
51	18	28	27	27	29	27	27	28	26	28	28	28	28	26	27	29	28	29	29	30	30
52	21	29	28	29	30	28	29	32	27	29	29	29	29	27	28	30	29	30	30	31	31
53	19	30	31	29	30	29	29	30	28	30	30	30	30	29	30	31	30	30	31	31	31
54	19	30	32	31	31	30	30	31	29	31	31	31	31	30	31	32	31	31	32	32	32
55	19	31	32	32	32	30	30	31	30	32	32	32	32	31	32	33	32	32	33	33	33
56	22	31	33	33	33	31	31	32	31	33	33	33	33	32	34	35	33	33	34	34	34
57	22	31	34	33	33	32	32	32	32	35	35	35	35	34	35	36	34	34	35	35	35
58	22	31	34	34	34	33	33	33	33	36	36	36	36	35	37	38	35	35	36	36	36

## Enlisted Selected Reserve Timing Table

Completed Years Of Total Active Federal Military Service

Age	Under 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	2	3	4	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	2	4	4	5	5	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	3	5	4	5	6	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	4	5	5	5	6	7	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	5	6	6	6	6	7	8	8	9	0	0	0	0	0	0	0	0	0	0	0	0
26	6	7	7	7	7	7	8	9	9	10	0	0	0	0	0	0	0	0	0	0	0
27	6	8	7	7	8	8	8	9	10	10	11	0	0	0	0	0	0	0	0	0	0
28	7	8	8	8	8	9	9	9	10	11	11	12	0	0	0	0	0	0	0	0	0
29	8	10	9	9	9	9	10	10	10	11	12	12	13	0	0	0	0	0	0	0	0
30	9	10	10	10	10	10	10	11	11	11	12	13	13	14	0	0	0	0	0	0	0
31	10	11	11	11	11	11	11	11	12	12	12	13	14	14	15	0	0	0	0	0	0
32	10	12	12	12	12	12	12	12	12	12	13	13	14	15	16	16	0	0	0	0	0
33	11	13	13	13	13	13	13	13	13	13	13	14	15	15	16	17	17	0	0	0	0
34	12	14	14	14	14	14	13	14	14	14	14	15	15	15	16	17	17	18	0	0	0
35	13	15	14	15	14	14	14	15	15	15	15	16	16	16	17	17	18	18	19	0	0
36	14	16	15	16	15	15	15	15	16	16	15	16	17	17	17	17	18	18	19	20	0
37	15	16	16	17	17	16	16	17	16	17	16	17	17	17	18	17	19	18	20	20	21
38	16	17	16	17	17	17	17	17	17	17	16	18	18	18	18	18	19	20	20	20	21
39	17	18	18	19	18	18	18	18	18	18	17	18	19	19	20	18	20	20	21	21	21
40	17	18	19	20	19	19	19	19	19	19	18	19	20	20	20	20	21	22	21	21	21
41	18	20	21	21	20	20	20	20	19	20	19	20	20	20	21	20	22	22	22	22	22
42	18	21	21	21	21	21	20	21	21	22	20	19	20	21	21	21	23	24	23	23	23
43	19	21	23	23	22	22	23	21	21	21	20	20	21	21	21	21	24	24	24	24	24
44	20	22	24	24	24	23	24	24	22	23	21	22	22	22	22	23	24	24	25	25	25
45	21	23	24	25	24	23	24	24	24	24	21	23	21	23	22	22	23	24	26	26	26
46	21	23	26	25	26	25	25	24	25	24	24	24	21	24	21	23	24	25	26	26	26
47	22	24	27	26	26	25	25	28	26	26	24	25	24	23	26	24	26	26	27	27	27
48	23	25	28	27	27	25	26	28	27	27	27	26	26	25	25	25	26	27	28	28	28
49	24	27	29	29	29	27	28	28	28	28	28	29	28	26	26	26	26	28	29	29	29
50	25	28	29	30	29	28	26	30	30	30	30	30	30	27	27	27	27	29	30	30	30
51	25	27	30	31	31	30	31	31	31	31	31	31	31	29	29	29	29	30	31	31	31
52	27	29	31	31	32	31	32	31	31	31	31	31	31	30	30	30	30	31	32	32	32
53	26	30	32	33	33	33	33	32	32	32	32	32	32	31	31	31	31	32	33	33	33
54	26	30	31	33	34	34	34	33	33	33	33	33	33	33	33	33	33	33	34	34	34
55	22	28	34	35	35	35	35	34	34	34	34	34	34	34	34	34	34	34	35	35	35
56	27	32	34	33	36	36	36	35	35	35	35	35	35	35	35	35	35	35	36	36	36
57	29	33	35	37	37	37	37	36	36	36	36	36	36	36	36	36	36	36	37	37	37
58	27	33	36	34	38	38	38	37	37	37	37	37	37	37	37	37	37	38	38	38	38

# Officer Selected Reserve Promotion and Merit Basic Pay Increase Ratios

Completed Years Of Total Active Federal Military Service

Age	Under 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	1.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	1.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	1.000	1.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	1.039	1.000	1.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	1.014	1.000	1.000	1.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	1.010	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	1.053	1.068	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	1.068	1.054	1.036	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	1.049	1.019	1.024	1.036	1.103	1.000	1.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	1.040	1.049	1.010	1.031	1.030	1.081	1.000	1.000	1.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	1.041	1.040	1.028	1.036	1.025	1.030	1.150	1.000	1.000	1.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	1.044	1.051	1.057	1.050	1.020	1.018	1.039	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	1.049	1.064	1.054	1.038	1.034	1.016	1.019	1.023	1.139	1.118	1.000	1.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	1.041	1.043	1.036	1.042	1.030	1.035	1.021	1.029	1.043	1.063	1.083	1.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
32	1.038	1.042	1.038	1.021	1.030	1.036	1.032	1.033	1.041	1.023	1.041	1.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
33	1.028	1.034	1.032	1.031	1.037	1.036	1.041	1.042	1.028	1.029	1.035	1.129	1.077	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
34	1.024	1.029	1.033	1.035	1.026	1.025	1.024	1.025	1.024	1.027	1.024	1.036	1.070	1.054	1.000	1.000	1.000	0.000	0.000	0.000	0.000
35	1.020	1.031	1.047	1.041	1.040	1.031	1.033	1.038	1.039	1.041	1.038	1.038	1.059	1.062	1.000	1.000	1.000	0.000	0.000	0.000	0.000
36	1.025	1.028	1.031	1.040	1.040	1.031	1.035	1.034	1.026	1.026	1.030	1.038	1.029	1.054	1.132	1.000	1.000	0.000	0.000	0.000	0.000
37	1.017	1.023	1.024	1.031	1.034	1.028	1.025	1.030	1.025	1.029	1.022	1.024	1.021	1.032	1.018	1.194	1.000	0.000	0.000	0.000	0.000
38	1.015	1.017	1.018	1.019	1.031	1.029	1.032	1.023	1.016	1.023	1.019	1.016	1.031	1.009	1.017	1.035	1.133	1.092	1.010	0.984	1.000
39	1.007	1.019	1.019	1.013	1.024	1.022	1.025	1.025	1.024	1.020	1.033	1.018	1.019	1.030	1.010	1.018	1.018	1.046	1.046	1.046	1.000
40	1.015	1.007	1.017	1.022	1.016	1.025	1.019	1.025	1.021	1.024	1.017	1.025	1.023	1.029	1.027	1.016	1.002	1.038	1.038	1.038	1.000
41	1.013	1.019	1.020	1.018	1.017	1.020	1.019	1.014	1.024	1.013	1.017	1.024	1.030	1.027	1.030	1.031	1.040	1.038	1.038	1.038	1.000
42	1.012	1.019	1.017	1.018	1.026	1.030	1.019	1.025	1.021	1.029	1.020	1.028	1.017	1.020	1.020	1.028	1.017	1.028	1.028	1.028	1.038
43	1.009	1.026	1.031	1.025	1.020	1.030	1.027	1.018	1.021	1.024	1.028	1.020	1.033	1.027	1.024	1.013	1.030	1.001	0.981	0.981	1.030
44	1.015	1.023	1.018	1.013	1.018	1.024	1.028	1.022	1.020	1.014	1.013	1.023	1.021	1.025	1.018	1.025	1.033	1.025	1.047	1.047	1.046
45	1.016	1.015	1.014	1.031	1.015	1.014	1.029	1.024	1.019	1.011	1.017	1.001	1.016	1.007	1.011	1.005	1.013	1.025	1.042	1.042	1.035
46	1.021	1.023	1.025	1.020	1.021	1.016	1.017	1.027	1.027	1.028	1.024	1.016	1.008	1.018	1.010	1.018	1.009	1.032	0.993	0.993	0.994
47	1.022	1.028	1.023	1.021	1.023	1.013	1.039	1.026	1.019	1.015	1.019	1.022	1.019	1.024	1.019	1.033	1.014	1.010	1.019	1.019	1.019
48	1.021	1.024	1.036	1.018	1.017	1.017	1.007	1.024	1.015	1.026	1.015	1.028	1.003	1.002	1.014	1.007	1.010	1.033	1.031	1.031	1.031
49	1.023	1.025	1.012	1.023	1.016	1.023	1.016	1.009	1.020	1.022	1.037	1.037	1.018	1.024	0.999	1.017	1.041	0.983	1.070	1.070	1.070
50	1.016	1.005	1.012	1.017	1.010	1.003	1.016	1.021	1.011	1.015	1.025	1.029	1.046	1.040	1.032	1.011	1.015	1.024	0.990	0.990	0.990
51	0.998	1.007	1.018	1.013	1.010	1.008	1.021	1.011	1.009	1.000	1.013	1.023	1.014	1.022	1.017	1.022	1.009	0.987	1.022	1.022	1.022
52	1.013	1.001	1.005	1.009	1.011	1.015	0.993	1.000	1.013	1.048	0.996	1.017	1.029	1.017	1.044	1.028	1.027	1.044	1.047	1.047	1.047
53	0.994	1.021	1.005	0.999	1.004	1.008	1.001	1.011	1.004	1.001	1.017	0.972	1.013	1.020	1.055	0.990	1.001	1.065	0.990	0.990	0.990
54	0.994	1.013	0.994	1.011	0.997	1.002	1.018	1.002	1.033	1.001	0.980	1.027	0.994	0.989	1.002	1.038	1.009	0.977	0.977	0.977	0.977
55	1.013	0.996	1.011	0.981	0.998	0.980	1.001	0.950	0.994	0.996	1.019	1.011	0.987	1.011	0.995	1.040	1.062	1.062	1.062	1.062	1.062
56	0.994	1.002	1.022	1.015	1.019	0.995	1.020	0.973	1.005	1.028	0.982	1.002	0.949	1.047	0.999	0.999	0.999	0.999	0.999	0.999	0.999
57	1.014	1.011	1.010	1.004	0.995	1.012	0.992	1.049	0.950	1.001	1.056	1.014	1.018	0.920	1.004	1.004	1.004	1.004	1.004	1.004	1.004
58	1.023	1.011	0.995	0.996	0.984	1.009	0.994	0.993	1.040	0.968	0.989	1.006	1.016	1.039	0.980	0.980	0.980	0.980	0.980	0.980	0.980
59	0.982	1.026	1.010	1.007	1.028	1.005	1.002	0.960	0.975	1.066	1.005	0.969	1.041	0.992	0.992	0.992	0.992	0.992	0.992	0.992	0.992
60	1.040	1.054	1.055	1.048	1.051	1.030	0.989	1.068	1.003	0.921	0.951	0.951	0.951	0.951	0.951	0.951	0.951	0.951	0.951	0.951	0.951
61	1.013	1.023	1.015	1.011	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.001
62	1.024	0.978	1.022	1.035	1.062	1.056	1.056	1.056	1.056	1.056	1.056	1.056	1.056	1.056	1.056	1.056	1.056	1.056	1.056	1.056	1.056

Note: The number that appears in the column marked 'under1' and the row marked '62' is the ratio of average basic pay at age 63 and above to basic pay at 62 for a member with less than a completed year of active duty service.



# Enlisted Selected Reserve Promotion and Merit Basic Pay Increase Ratios

Completed Years Of Total Active Federal Military Service

Age	Under 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	1.042	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	1.120	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	1.079	1.077	1.044	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	1.063	1.060	1.065	1.289	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	1.051	1.043	1.024	1.041	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	1.038	1.030	1.025	1.017	1.007	1.076	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	1.030	1.031	1.020	1.017	1.012	1.028	1.127	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	1.030	1.030	1.027	1.021	1.019	1.019	1.022	1.067	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	1.030	1.040	1.025	1.024	1.022	1.022	1.017	1.038	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	1.028	1.052	1.030	1.027	1.024	1.027	1.018	1.013	1.047	1.140	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	1.030	1.048	1.034	1.029	1.030	1.026	1.021	1.014	1.011	1.039	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	1.030	1.042	1.039	1.035	1.032	1.033	1.028	1.020	1.018	1.013	1.038	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	1.030	1.038	1.042	1.037	1.032	1.031	1.024	1.019	1.023	1.017	1.027	1.071	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	1.026	1.039	1.039	1.035	1.034	1.031	1.026	1.018	1.021	1.011	1.022	1.012	1.081	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	1.022	1.034	1.032	1.032	1.030	1.029	1.028	1.024	1.023	1.020	1.025	1.022	1.002	1.053	1.000	0.000	0.000	0.000	0.000	0.000	0.000
32	1.021	1.024	1.028	1.029	1.031	1.031	1.025	1.022	1.018	1.019	1.020	1.001	0.999	1.015	1.004	0.000	0.000	0.000	0.000	0.000	0.000
33	1.020	1.021	1.022	1.027	1.026	1.025	1.024	1.023	1.023	1.017	1.021	1.015	1.010	1.010	1.007	1.007	1.000	0.000	0.000	0.000	0.000
34	1.018	1.023	1.025	1.018	1.026	1.030	1.024	1.023	1.031	1.021	1.021	1.011	1.021	1.012	1.005	1.016	1.098	1.000	0.000	0.000	0.000
35	1.017	1.022	1.022	1.015	1.026	1.023	1.027	1.023	1.028	1.016	1.022	1.015	1.010	1.024	1.016	1.019	1.019	1.000	0.000	0.000	0.000
36	1.013	1.017	1.013	1.013	1.017	1.025	1.021	1.025	1.031	1.020	1.018	1.023	1.016	1.012	1.032	1.017	1.021	1.109	1.173	1.000	0.000
37	1.016	1.008	1.022	1.016	1.016	1.023	1.019	1.023	1.018	1.018	1.019	1.010	1.016	1.009	1.000	1.028	0.995	1.028	1.038	1.000	0.000
38	1.016	1.012	1.014	1.012	1.014	1.019	1.017	1.014	1.015	1.020	1.018	1.013	1.005	1.012	1.017	1.019	1.041	0.988	1.071	1.183	1.000
39	1.011	1.011	1.026	1.019	1.015	1.022	1.008	1.022	1.013	1.018	1.014	1.014	1.005	1.004	1.015	1.015	1.007	1.000	1.000	1.000	1.000
40	1.013	1.012	1.016	1.022	1.022	1.026	1.017	1.023	1.007	1.011	1.021	1.011	1.003	1.004	1.005	1.017	1.001	1.017	1.017	1.017	1.000
41	1.013	1.011	1.013	1.020	1.018	1.015	1.021	1.005	1.010	1.019	1.005	1.018	1.007	1.003	0.998	1.009	1.007	1.004	1.004	1.004	1.000
42	1.017	1.007	1.012	1.009	1.022	1.022	1.016	1.020	1.020	1.012	1.022	1.015	1.015	1.000	1.017	0.996	0.982	1.002	1.002	1.002	1.108
43	1.026	1.009	1.008	1.017	1.015	1.013	1.021	1.018	1.026	1.024	1.018	1.013	1.005	1.022	1.009	0.996	1.007	1.015	1.015	1.015	1.015
44	1.048	1.021	1.025	1.023	1.014	1.018	1.018	1.030	1.019	1.030	1.026	1.026	1.029	1.000	0.996	1.001	1.009	0.991	0.991	0.991	0.991
45	1.029	1.029	1.026	1.025	1.013	1.017	1.011	1.011	1.031	1.027	1.024	1.025	1.029	1.034	1.010	1.023	1.005	1.030	1.030	1.030	1.030
46	1.035	1.024	1.031	1.028	1.018	1.022	1.010	1.007	1.015	1.010	1.033	1.017	1.027	1.009	1.022	1.017	1.029	0.989	0.989	0.989	0.989
47	1.027	1.017	1.024	1.019	1.025	1.019	1.028	1.013	1.024	1.019	1.030	1.031	1.016	1.013	0.999	1.012	1.000	1.015	1.015	1.015	1.015
48	1.018	1.011	1.009	1.024	1.014	1.037	1.014	1.024	1.014	1.010	1.004	1.014	1.014	1.010	1.037	0.986	0.997	1.042	1.042	1.042	1.042
49	1.021	1.006	1.007	1.011	1.016	1.020	1.038	1.025	1.006	1.022	1.023	1.011	1.011	1.034	1.054	1.035	1.017	0.976	0.976	0.976	0.976
50	1.009	1.013	1.005	1.015	1.015	1.018	1.024	1.026	1.026	1.014	0.994	1.002	1.026	1.025	0.989	1.031	1.022	0.982	0.982	0.982	0.982
51	1.018	1.011	1.003	1.006	1.011	1.018	1.033	1.015	1.003	1.043	1.004	1.000	0.997	1.006	0.996	1.010	1.034	1.047	1.047	1.047	1.047
52	1.016	1.004	1.009	1.011	1.007	1.006	1.028	1.012	1.009	1.015	1.008	0.998	1.011	1.042	1.042	1.029	1.017	1.017	1.017	1.017	1.017
53	1.003	1.006	1.017	1.007	1.002	1.002	1.021	1.021	1.003	0.995	1.014	1.028	1.025	1.012	1.040	1.032	1.033	1.033	1.033	1.033	1.033
54	1.007	0.998	1.010	1.001	0.993	0.994	1.009	1.013	1.029	0.996	1.006	1.035	1.039	0.992	0.993	1.003	1.015	1.015	1.015	1.015	1.015
55	0.987	1.002	1.002	0.998	0.993	0.985	0.991	1.005	0.987	1.000	1.011	1.018	0.964	1.030	1.059	0.975	1.046	1.046	1.046	1.046	1.046
56	1.007	1.002	0.996	1.005	1.002	1.002	1.003	0.989	0.993	1.016	0.998	1.031	0.999	0.962	0.921	1.017	0.934	0.934	0.934	0.934	0.934
57	1.015	1.020	1.012	0.999	1.020	0.995	1.012	1.032	1.047	0.993	1.080	0.986	1.029	1.042	1.029	1.029	1.029	1.029	1.029	1.029	1.029
58	0.995	1.004	1.009	1.019	1.012	1.009	0.999	1.003	1.002	1.032	0.995	1.010	1.019	0.974	1.086	1.086	1.086	1.086	1.086	1.086	1.086
59	0.997	0.989	0.985	0.979	0.990	0.993	1.028	1.009	1.018	0.979	0.978	1.001	1.104	1.025	0.939	0.939	0.939	0.939	0.939	0.939	0.939
60	0.862	0.899	0.846	0.868	0.850	0.853	0.883	0.963	0.902	0.700	0.779	0.800	0.754	0.851	0.851	0.851	0.851	0.851	0.851	0.851	0.851
61	1.034	0.974	1.024	1.020	1.024	0.959	0.861	0.815	0.876	1.148	1.020	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994
62	0.885	0.885	0.885	0.885	0.885	0.885	0.885	0.885	0.885	0.885	0.885	0.885	0.885	0.885	0.885	0.885	0.885	0.885	0.885	0.885	0.885

Note: The number that appears in the column marked 'under1' and the row marked '62' is the ratio of average basic pay at age 63 and above to basic pay at 62 for a member with less than a completed year of active duty service.



## APPENDIX I

### RETIREE AND SURVIVOR RATES

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## **RETIREE AND SURVIVOR RATES**

The military retiree decrement rates are used to predict death, “other” losses from retired pay status, and rates of transfer from temporary disability to permanent disability. The “other” losses consist primarily of returns to active duty and full waiver of retired pay to receive a higher annuity from the Veterans Affairs or Civil Service. These rates were developed by age nearest birthday for officers and enlistees separately, and were further subdivided by three types of retirement: nondisability, temporary disability, and permanent disability. For temporary disability retirees, select rates were created for each of the first five years of retirement. After five years, those who are still in the temporary disability status are transferred to a permanent disability status.

The data for the rates were taken from the Defense Manpower Data Center Retiree and Survivor Files as of September 30 for the years 2000 through 2006. These files were created by the Finance Centers of the military services (now consolidated under the Defense Finance and Accounting Service), which have responsibility for sending monthly retired pay checks to military retirees. A military retiree can be in “paid status” or “nonpaid status.” Nonpaid status indicates that a retiree has an entitlement to an annuity, but the annuity is fully reduced by offsets. Retirees who terminate from paid status during a fiscal year are on the retiree file at the end of that fiscal year with a termination code indicating the type of termination.

The rate development process began by matching two consecutive fiscal year-end files by Social Security number. Cases no longer in paid status were categorized by type of loss. In a few cases, there was no follow-up record. Some of the cases represent changed or corrected Social Security numbers. Where there was a previously retired person with a new Social Security number, it was subtracted from the cases with no follow-up record. The remaining unknowns were prorated. In addition, persons who discontinued a previous waiver of DoD retired pay were subtracted from other losses. After following the above procedures, crude rates were created using the formulas given on page I-3. These were smoothed using a Whittaker-Henderson type B graduation, or by fitting a polynomial to the crude rates. Where there was reason to suspect valid discontinuities in the underlying rates, those segments were not smoothed. A summary of the years on which various rates are based is given on page I-5.

Retiree and survivor rates are shown on pages I-6 through I-18.

## RETIREE AND SURVIVOR DECREMENT RATE FORMULAS

### DEATH OF NONDISABILITY RETIREES (by age nearest birthday)

$$\frac{\text{Nondisability deaths}}{\text{[Number at beginning of year - } \frac{1}{2} \text{ (Nondisability deaths + other losses)]}}$$

### DEATH OF PERMANENT DISABILITY RETIREES (by age nearest birthday)

$$\frac{\text{Permanent disability deaths}}{\text{[Number at beginning of year - } \frac{1}{2} \text{ (Permanent disability deaths + other losses)]}}$$

### DEATH OF TEMPORARY DISABILITY RETIREES (by age nearest birthday and years retired)

$$\frac{\text{Temporary disability deaths in category}^1}{\text{[Number at beginning of year - } \frac{1}{2} \text{ (Deaths + transfers + other losses)]}}$$

### OTHER LOSSES FROM NONDISABILITY (by age nearest birthday)

$$\frac{\text{Losses other than death}}{\text{Number at beginning of year}}$$

### OTHER LOSSES FROM TEMPORARY DISABILITY (by age nearest birthday and years retired)

$$\frac{\text{Losses other than death or transfers to permanent}}{\text{Number at beginning of year}}$$

### TRANSFER FROM TEMPORARY TO PERMANENT DISABILITY (by age nearest birthday and years retired)

$$\frac{\text{Transfers to permanent}}{\text{Number at beginning of year}}$$

### OTHER LOSSES FROM PERMANENT DISABILITY (by age nearest birthday)

$$\frac{\text{Losses other than death}}{\text{Number at beginning of year}}$$

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<sup>1</sup> Includes deaths of members who were temporarily disabled at the beginning of the year, then transferred to permanent disability, and later died before the end of the year.

**RETIREE AND SURVIVOR DECREMENT RATE FORMULAS  
(cont.)**

RETIREE DIVORCE (weighted by coverage amount, by age nearest birthday)

$$\frac{\text{Net retiree divorces}}{\text{Number at beginning of year}}$$

REMARRIAGE OF SURVIVING SPOUSE (by age nearest birthday)

$$\frac{\text{Surviving spouse remarriages}}{\text{Number at beginning of year}}$$

SURVIVING CHILD TERMINATION (by age nearest birthday)

$$\frac{\text{Child terminations}}{\text{Number at beginning of year}}$$

DEATH OF SURVIVING SPOUSE (by age nearest birthday)

$$\frac{\text{Survivor deaths}}{\text{Number at beginning of year}}$$

OTHER LOSS FROM SURVIVING SPOUSE (by age nearest birthday)

$$\frac{\text{Survivor losses other than deaths}}{\text{Number at beginning of year}}$$

# SUMMARY OF YEARS ON WHICH RETIREE AND SURVIVOR RATES ARE BASED

Fiscal Years on Which Rates Are Based

<u>DEATH RATES</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>
ND Officers						X	X	
ND Enlistees						X	X	
PD Officers		X	X	X				
PD Enlistees	X	X	X	X				
TD Officers	X	X	X	X	X	X	X	
TD Enlistees	X	X	X	X	X	X	X	
<u>OTHER LOSS RATES</u>								
ND Officers						X	X	
ND Enlistees						X	X	
PD Officers		X	X	X				
PD Enlistees	X	X	X	X				
TD Officers	X	X	X	X	X	X	X	
TD Enlistees	X	X	X	X	X	X	X	
<u>TRANSFER RATES</u>								
<u>FROM TD TO PD</u>								
Officers	X	X	X	X	X	X	X	
Enlistees	X	X	X	X	X	X	X	
<u>RETIREE DIVORCE</u>								
	X		X	X	X	X		
<u>SURVIVOR RATES</u>								
Remarriage						X	X	X
Child Termination						X	X	X
Survivor Death						X	X	X
Survivor Other Loss						X	X	X

\*\*\* ND = Nondisabled  
 PD = Permanently Disabled  
 TD = Temporarily Disabled

# **RETIRED NONDISABILITY DEATH RATES (BY AGE OF NEAREST BIRTHDAY)**

## **OFFICERS**

Age	Non-disability	Permanent Disability	Temporary Disability				
			Year of Retirement				
			One	Two	Three	Four	Five
16	0.00000	0.00265	0.02302	0.01162	0.00595	0.00232	0.00234
17	0.00000	0.00292	0.02145	0.01083	0.00554	0.00216	0.00218
18	0.00000	0.00312	0.01999	0.01009	0.00516	0.00201	0.00203
19	0.00000	0.00328	0.01863	0.00940	0.00481	0.00187	0.00189
20	0.00000	0.00344	0.01735	0.00876	0.00448	0.00175	0.00176
21	0.00000	0.00359	0.01621	0.00818	0.00419	0.00163	0.00165
22	0.00000	0.00377	0.01521	0.00768	0.00393	0.00153	0.00154
23	0.00000	0.00399	0.01434	0.00724	0.00370	0.00144	0.00146
24	0.00000	0.00423	0.01360	0.00687	0.00351	0.00137	0.00138
25	0.00000	0.00448	0.01302	0.00657	0.00336	0.00131	0.00132
26	0.00000	0.00472	0.01258	0.00635	0.00325	0.00127	0.00128
27	0.00000	0.00493	0.01230	0.00621	0.00318	0.00124	0.00125
28	0.00000	0.00511	0.01218	0.00615	0.00315	0.00123	0.00124
29	0.00000	0.00528	0.01223	0.00617	0.00316	0.00123	0.00124
30	0.00029	0.00544	0.01245	0.00628	0.00322	0.00125	0.00126
31	0.00030	0.00557	0.01285	0.00648	0.00332	0.00129	0.00130
32	0.00031	0.00569	0.01343	0.00678	0.00347	0.00135	0.00136
33	0.00031	0.00575	0.01420	0.00717	0.00367	0.00143	0.00144
34	0.00031	0.00576	0.01517	0.00766	0.00392	0.00153	0.00154
35	0.00031	0.00577	0.01635	0.00825	0.00422	0.00164	0.00166
36	0.00032	0.00585	0.01774	0.00895	0.00458	0.00178	0.00180
37	0.00033	0.00604	0.01935	0.00977	0.00500	0.00195	0.00197
38	0.00033	0.00604	0.02119	0.01070	0.00547	0.00213	0.00215
39	0.00035	0.00604	0.02327	0.01174	0.00601	0.00234	0.00236
40	0.00037	0.00604	0.02559	0.01291	0.00661	0.00257	0.00260
41	0.00048	0.00604	0.02816	0.01421	0.00727	0.00283	0.00286
42	0.00059	0.00604	0.03099	0.01564	0.00800	0.00312	0.00315
43	0.00066	0.00604	0.03409	0.01721	0.00881	0.00343	0.00346
44	0.00072	0.00604	0.03747	0.01891	0.00968	0.00377	0.00381
45	0.00080	0.00604	0.04113	0.02076	0.01062	0.00414	0.00418
46	0.00098	0.00604	0.04509	0.02276	0.01165	0.00453	0.00458
47	0.00105	0.00604	0.04935	0.02491	0.01275	0.00496	0.00501
48	0.00115	0.00604	0.05392	0.02722	0.01393	0.00542	0.00548
49	0.00126	0.00604	0.05882	0.02969	0.01519	0.00592	0.00597
50	0.00139	0.00629	0.06405	0.03233	0.01655	0.00644	0.00651
51	0.00154	0.00690	0.06962	0.03514	0.01798	0.00700	0.00707
52	0.00172	0.00756	0.07554	0.03813	0.01951	0.00760	0.00767
53	0.00191	0.00827	0.08182	0.04130	0.02114	0.00823	0.00831
54	0.00213	0.00904	0.08847	0.04465	0.02285	0.00890	0.00899
55	0.00238	0.00986	0.09550	0.04820	0.02467	0.00961	0.00970
56	0.00266	0.01075	0.10292	0.05195	0.02659	0.01035	0.01045
57	0.00298	0.01170	0.11074	0.05590	0.02861	0.01114	0.01125
58	0.00336	0.01272	0.11897	0.06005	0.03073	0.01197	0.01208
59	0.00379	0.01596	0.12762	0.06442	0.03297	0.01284	0.01296
60	0.00429	0.01880	0.13670	0.06900	0.03531	0.01375	0.01388
61	0.00488	0.01995	0.14623	0.07381	0.03777	0.01471	0.01485



# **RETIRED NONDISABILITY DEATH RATES (BY AGE OF NEAREST BIRTHDAY)**

## **OFFICERS (continued)**

Age	Non-disability	Permanent Disability	Temporary Disability				
			Year of Retirement				
			One	Two	Three	Four	Five
62	0.00557	0.01957	0.15642	0.07895	0.04041	0.01573	0.01589
63	0.00636	0.01862	0.16731	0.08445	0.04322	0.01683	0.01699
64	0.00728	0.01858	0.17897	0.09033	0.04623	0.01800	0.01818
65	0.00831	0.02003	0.19144	0.09663	0.04945	0.01925	0.01944
66	0.00948	0.02338					
67	0.01079	0.02727					
68	0.01224	0.03126					
69	0.01383	0.03419					
70	0.01563	0.03602					
71	0.01764	0.03814					
72	0.01987	0.04069					
73	0.02239	0.04425					
74	0.02520	0.04750					
75	0.02835	0.05026					
76	0.03193	0.05254					
77	0.03597	0.05542					
78	0.04062	0.05975					
79	0.04589	0.06538					
80	0.05184	0.07265					
81	0.05856	0.08075					
82	0.06632	0.08970					
83	0.07495	0.09953					
84	0.08481	0.11077					
85	0.09614	0.12313					
86	0.10879	0.13604					
87	0.12271	0.14878					
88	0.13827	0.16254					
89	0.15539	0.17804					
90	0.17405	0.19684					
91	0.19457	0.21905					
92	0.21653	0.24528					
93	0.24019	0.27517					
94	0.26557	0.30975					
95	0.29266	0.34818					
96	0.32143	0.39034					
97	0.35188	0.43621					
98	0.38403	0.46776					
99	0.41779	0.49911					
100	0.45329	0.53094					
101	0.49053	0.56402					
102	0.52946	0.59918					
103	0.55691	0.63923					
104	0.58602	0.66667					
105	0.61520	0.66667					
106	0.64289	0.66667					
107	0.66748	0.66667					
108	0.67190	0.66667					
109	0.67182	0.66667					
110	1.00000	1.00000					

# **RETIRED NONDISABILITY DEATH RATES (BY AGE OF NEAREST BIRTHDAY)**

## **ENLISTED**

Age	Non-disability	Permanent Disability	Temporary Disability				
			Year of Retirement				
			One	Two	Three	Four	Five
16	0.00000	0.00192	0.01100	0.00566	0.00407	0.00594	0.00516
17	0.00000	0.00212	0.01025	0.00528	0.00380	0.00554	0.00481
18	0.00000	0.00226	0.00955	0.00492	0.00354	0.00516	0.00448
19	0.00000	0.00238	0.00890	0.00458	0.00330	0.00481	0.00418
20	0.00000	0.00249	0.00829	0.00427	0.00307	0.00448	0.00389
21	0.00000	0.00260	0.00775	0.00399	0.00287	0.00418	0.00363
22	0.00000	0.00273	0.00727	0.00374	0.00269	0.00392	0.00341
23	0.00000	0.00289	0.00685	0.00353	0.00254	0.00370	0.00321
24	0.00000	0.00307	0.00650	0.00335	0.00241	0.00351	0.00305
25	0.00000	0.00325	0.00622	0.00320	0.00230	0.00336	0.00292
26	0.00000	0.00342	0.00601	0.00310	0.00223	0.00325	0.00282
27	0.00000	0.00357	0.00588	0.00303	0.00218	0.00318	0.00276
28	0.00000	0.00371	0.00582	0.00300	0.00216	0.00314	0.00273
29	0.00000	0.00383	0.00585	0.00301	0.00216	0.00316	0.00274
30	0.00050	0.00394	0.00595	0.00306	0.00220	0.00321	0.00279
31	0.00051	0.00403	0.00614	0.00316	0.00227	0.00331	0.00288
32	0.00052	0.00403	0.00642	0.00330	0.00238	0.00347	0.00301
33	0.00053	0.00403	0.00679	0.00349	0.00251	0.00366	0.00318
34	0.00053	0.00403	0.00725	0.00373	0.00268	0.00392	0.00340
35	0.00053	0.00440	0.00781	0.00402	0.00289	0.00422	0.00367
36	0.00053	0.00476	0.00848	0.00436	0.00314	0.00458	0.00398
37	0.00054	0.00513	0.00925	0.00476	0.00342	0.00499	0.00434
38	0.00057	0.00549	0.01013	0.00521	0.00375	0.00547	0.00475
39	0.00060	0.00585	0.01112	0.00572	0.00412	0.00600	0.00522
40	0.00063	0.00622	0.01223	0.00629	0.00453	0.00660	0.00574
41	0.00081	0.00605	0.01346	0.00693	0.00498	0.00727	0.00631
42	0.00099	0.00594	0.01481	0.00762	0.00548	0.00800	0.00695
43	0.00113	0.00590	0.01629	0.00839	0.00603	0.00880	0.00764
44	0.00123	0.00592	0.01791	0.00922	0.00663	0.00967	0.00840
45	0.00136	0.00601	0.01966	0.01012	0.00728	0.01061	0.00922
46	0.00167	0.00617	0.02155	0.01109	0.00798	0.01164	0.01011
47	0.00201	0.00640	0.02359	0.01214	0.00873	0.01274	0.01106
48	0.00214	0.00669	0.02577	0.01327	0.00954	0.01392	0.01209
49	0.00243	0.00707	0.02811	0.01447	0.01041	0.01518	0.01319
50	0.00258	0.00753	0.03061	0.01576	0.01133	0.01653	0.01436
51	0.00276	0.00807	0.03328	0.01713	0.01232	0.01797	0.01561
52	0.00323	0.00872	0.03610	0.01858	0.01337	0.01949	0.01694
53	0.00409	0.00947	0.03911	0.02013	0.01448	0.02112	0.01834
54	0.00462	0.01034	0.04229	0.02176	0.01566	0.02283	0.01983
55	0.00511	0.01135	0.04565	0.02349	0.01690	0.02465	0.02141
56	0.00607	0.01250	0.04919	0.02532	0.01821	0.02656	0.02307
57	0.00696	0.01381	0.05293	0.02724	0.01960	0.02858	0.02483
58	0.00763	0.01527	0.05686	0.02927	0.02105	0.03070	0.02667
59	0.00866	0.01691	0.06100	0.03139	0.02258	0.03294	0.02861
60	0.00951	0.01870	0.06534	0.03363	0.02419	0.03528	0.03065
61	0.01001	0.02065	0.06989	0.03597	0.02588	0.03774	0.03278

# **RETIRED NONDISABILITY DEATH RATES (BY AGE OF NEAREST BIRTHDAY)**

## **ENLISTED (continued)**

Age	Non-disability	Permanent Disability	Temporary Disability				
			Year of Retirement				
			One	Two	Three	Four	Five
62	0.01103	0.02274	0.07476	0.03848	0.02768	0.04037	0.03507
63	0.01245	0.02496	0.07997	0.04116	0.02961	0.04318	0.03751
64	0.01407	0.02729	0.08554	0.04403	0.03167	0.04619	0.04012
65	0.01596	0.02973	0.09150	0.04709	0.03388	0.04940	0.04292
66	0.01776	0.03229					
67	0.02019	0.03499					
68	0.02246	0.03786					
69	0.02483	0.04095					
70	0.02759	0.04432					
71	0.02995	0.04801					
72	0.03342	0.05210					
73	0.03789	0.05661					
74	0.04262	0.06162					
75	0.04666	0.06715					
76	0.05180	0.07326					
77	0.05769	0.07999					
78	0.06360	0.08737					
79	0.07096	0.09544					
80	0.07805	0.10424					
81	0.08565	0.11378					
82	0.09322	0.12410					
83	0.10228	0.13521					
84	0.11191	0.14712					
85	0.12219	0.15985					
86	0.13354	0.17339					
87	0.14790	0.18776					
88	0.16564	0.20295					
89	0.18671	0.21897					
90	0.21123	0.24203					
91	0.23725	0.26694					
92	0.26327	0.29352					
93	0.28804	0.32256					
94	0.30912	0.35439					
95	0.32501	0.38804					
96	0.33544	0.42243					
97	0.34353	0.45640					
98	0.35286	0.48942					
99	0.36568	0.52221					
100	0.38275	0.55552					
101	0.40411	0.59014					
102	0.43625	0.62692					
103	0.45893	0.66667					
104	0.48296	0.66667					
105	0.50708	0.66667					
106	0.52994	0.66667					
107	0.55029	0.66667					
108	0.56973	0.66667					
109	0.58914	0.66667					
110	1.00000	1.00000					

## OTHER LOSS RATES FROM NONDISABILITY

(Age Nearest Birthday)

<u>Age</u>	<u>Officer</u>	<u>Enlisted</u>	<u>Age</u>	<u>Officer</u>	<u>Enlisted</u>
16	0.00000	0.00000	56	0.00050	0.00777
17	0.00000	0.00000	57	0.00057	0.00820
18	0.00000	0.00000	58	0.00083	0.00880
19	0.00000	0.00000	59	0.00127	0.00961
20	0.00000	0.00000	60	0.00204	0.01061
21	0.00000	0.00000	61	0.00274	0.01138
22	0.00000	0.00000	62	0.00267	0.01040
23	0.00000	0.00000	63	0.00241	0.00954
24	0.00000	0.00000	64	0.00226	0.00945
25	0.00000	0.00000	65	0.00203	0.00905
26	0.00000	0.00000	66	0.00178	0.00833
27	0.00000	0.00000	67	0.00183	0.00850
28	0.00000	0.00000	68	0.00194	0.00917
29	0.00000	0.00000	69	0.00177	0.00921
30	0.00028	0.00952	70	0.00164	0.00945
31	0.00028	0.00952	71	0.00158	0.00947
32	0.00028	0.00952	72	0.00150	0.00949
33	0.00028	0.00952	73	0.00149	0.00906
34	0.00028	0.00952	74	0.00144	0.00826
35	0.00028	0.00952	75	0.00137	0.00789
36	0.00028	0.00952	76	0.00138	0.00774
37	0.00028	0.00952	77	0.00149	0.00786
38	0.00028	0.01596	78	0.00155	0.00804
39	0.00028	0.01038	79	0.00191	0.00785
40	0.00028	0.00726	80	0.00241	0.00774
41	0.00028	0.00571	81	0.00269	0.00733
42	0.00028	0.00506	82	0.00273	0.00693
43	0.00028	0.00472	83	0.00268	0.00697
44	0.00028	0.00430	84	0.00302	0.00749
45	0.00028	0.00408	85	0.00363	0.00814
46	0.00028	0.00418	86	0.00394	0.00842
47	0.00028	0.00416	87	0.00375	0.00828
48	0.00028	0.00409	88	0.00315	0.00827
49	0.00028	0.00388	89	0.00256	0.00851
50	0.00028	0.00396	90	0.00276	0.00891
51	0.00028	0.00419	91	0.00415	0.00921
52	0.00028	0.00454	92	0.00327	0.01255
53	0.00028	0.00534	93	0.00327	0.01255
54	0.00089	0.00609	94	0.00327	0.01255
55	0.00062	0.00697	95	0.00327	0.01255

\*\*\* The above Other Loss rates are used to calculate the DoD NCP. Refer to Item 2 in the Retiree section of Appendix F for application to the Total NCP.

# RATES OF OTHER LOSS, NONTRANSFER LOSSES FROM TEMPORARY DISABILITY

(Age Nearest Birthday)

Age	OFFICERS					ENLISTED				
	Year of Retirement					Year of Retirement				
	One	Two	Three	Four	Five	One	Two	Three	Four	Five
16	0.08718	0.10547	0.07069	0.07101	0.36874	0.19125	0.17225	0.11551	0.12636	0.40196
17	0.08953	0.10832	0.07260	0.07292	0.37870	0.20190	0.18184	0.12195	0.13340	0.42436
18	0.09195	0.11125	0.07456	0.07490	0.38894	0.21315	0.19197	0.12874	0.14083	0.44799
19	0.09444	0.11426	0.07658	0.07692	0.39945	0.22502	0.20267	0.13591	0.14868	0.47295
20	0.09699	0.11734	0.07865	0.07900	0.41025	0.23756	0.21395	0.14348	0.15696	0.49930
21	0.09961	0.12052	0.08077	0.08113	0.42134	0.24800	0.22336	0.14979	0.16386	0.52125
22	0.10231	0.12377	0.08296	0.08333	0.43273	0.25649	0.23100	0.15492	0.16947	0.53908
23	0.10507	0.12712	0.08520	0.08558	0.44443	0.26313	0.23699	0.15893	0.17386	0.55305
24	0.10791	0.13056	0.08750	0.08789	0.45644	0.26806	0.24143	0.16190	0.17712	0.56341
25	0.11034	0.13349	0.08947	0.08987	0.46670	0.27138	0.24442	0.16391	0.17931	0.57039
26	0.11233	0.13591	0.09109	0.09150	0.47515	0.27321	0.24606	0.16502	0.18052	0.57423
27	0.11389	0.13779	0.09235	0.09277	0.48174	0.27366	0.24647	0.16529	0.18081	0.57517
28	0.11500	0.13914	0.09325	0.09367	0.48644	0.27283	0.24573	0.16479	0.18027	0.57344
29	0.11566	0.13993	0.09379	0.09421	0.48923	0.27084	0.24394	0.16359	0.17896	0.56926
30	0.11587	0.14018	0.09395	0.09437	0.49009	0.26780	0.24119	0.16175	0.17695	0.56286
31	0.11562	0.13988	0.09376	0.09417	0.48905	0.26380	0.23759	0.15934	0.17431	0.55446
32	0.11493	0.13905	0.09319	0.09361	0.48613	0.25896	0.23323	0.15641	0.17111	0.54429
33	0.11380	0.13768	0.09228	0.09269	0.48136	0.25338	0.22821	0.15304	0.16742	0.53256
34	0.11225	0.13581	0.09102	0.09143	0.47481	0.24716	0.22261	0.14928	0.16331	0.51949
35	0.11030	0.13344	0.08944	0.08984	0.46654	0.24041	0.21653	0.14521	0.15885	0.50530
36	0.10796	0.13061	0.08754	0.08793	0.45665	0.23324	0.21007	0.14087	0.15411	0.49022
37	0.10526	0.12735	0.08535	0.08574	0.44523	0.22574	0.20331	0.13635	0.14916	0.47447
38	0.10223	0.12369	0.08290	0.08327	0.43243	0.21803	0.19637	0.13169	0.14406	0.45825
39	0.09891	0.11967	0.08021	0.08056	0.41837	0.21020	0.18931	0.12696	0.13889	0.44180
40	0.09533	0.11533	0.07730	0.07765	0.40322	0.20236	0.18226	0.12222	0.13371	0.42532
41	0.09153	0.11074	0.07422	0.07455	0.38716	0.19462	0.17528	0.11755	0.12859	0.40905
42	0.08757	0.10594	0.07101	0.07132	0.37039	0.18708	0.16849	0.11300	0.12361	0.39321
43	0.08348	0.10100	0.06769	0.06800	0.35311	0.17985	0.16198	0.10863	0.11883	0.37801
44	0.07934	0.09599	0.06433	0.06462	0.33558	0.17303	0.15584	0.10451	0.11433	0.36368
45	0.07519	0.09097	0.06097	0.06124	0.31805	0.16673	0.15016	0.10070	0.11016	0.35043
46	0.07111	0.08603	0.05766	0.05792	0.30079	0.16105	0.14505	0.09728	0.10641	0.33850
47	0.06717	0.08126	0.05446	0.05471	0.28410	0.15611	0.14060	0.09429	0.10315	0.32811
48	0.06343	0.07674	0.05144	0.05167	0.26831	0.15200	0.13690	0.09181	0.10043	0.31948
49	0.05999	0.07258	0.04865	0.04886	0.25375	0.14884	0.13406	0.08990	0.09835	0.31284
50	0.05693	0.06887	0.04616	0.04637	0.24078	0.14674	0.13216	0.08863	0.09696	0.30841
51	0.05433	0.06573	0.04405	0.04425	0.22979	0.14579	0.13131	0.08806	0.09633	0.30643
52	0.05229	0.06327	0.04240	0.04259	0.22119	0.14612	0.13160	0.08825	0.09655	0.30711
53	0.05093	0.06161	0.04129	0.04148	0.21540	0.14782	0.13314	0.08928	0.09767	0.31069
54	0.05033	0.06089	0.04081	0.04099	0.21288	0.15101	0.13601	0.09121	0.09978	0.31740
55	0.05062	0.06124	0.04105	0.04123	0.21411	0.15580	0.14033	0.09410	0.10295	0.32747
56	0.05191	0.06280	0.04209	0.04228	0.21957	0.16230	0.14618	0.09803	0.10724	0.34113
57	0.05433	0.06573	0.04405	0.04425	0.22980	0.17062	0.15367	0.10305	0.11273	0.35860
58	0.05800	0.07017	0.04703	0.04724	0.24533	0.18086	0.16289	0.10924	0.11950	0.38013
59	0.06307	0.07630	0.05114	0.05137	0.26675	0.19314	0.17395	0.11666	0.12762	0.40594
60	0.06966	0.08428	0.05649	0.05674	0.29465	0.20757	0.18695	0.12537	0.13715	0.43628
61	0.07793	0.09429	0.06320	0.06348	0.32964	0.22308	0.20092	0.13474	0.14740	0.46888
62	0.08804	0.10651	0.07139	0.07171	0.37238	0.23976	0.21594	0.14481	0.15842	0.50392
63	0.09945	0.12032	0.08064	0.08100	0.42066	0.25767	0.23207	0.15563	0.17025	0.54158
64	0.11235	0.13592	0.09110	0.09151	0.47520	0.27693	0.24941	0.16726	0.18298	0.58205
65	0.12691	0.15355	0.10291	0.10337	0.53681	0.29762	0.26805	0.17976	0.19665	0.62554

\*\*\* The above Other Loss rates are used to calculate the DoD NCP. Refer to Item 2 in the Retiree section of Appendix F for application to the Total NCP.

# TRANSFER RATES FROM TEMPORARY DISABILITY TO PERMANENT DISABILITY

(Age Nearest Birthday)

Age	OFFICERS				ENLISTED			
	Year of Retirement				Year of Retirement			
	One	Two	Three	Four	One	Two	Three	Four
16	0.04007	0.08302	0.06475	0.10203	0.01107	0.02434	0.01957	0.02861
17	0.04172	0.08644	0.06742	0.10624	0.01279	0.02812	0.02260	0.03305
18	0.04345	0.09001	0.07020	0.11062	0.01477	0.03247	0.02610	0.03817
19	0.04524	0.09372	0.07310	0.11518	0.01706	0.03750	0.03015	0.04408
20	0.04711	0.09759	0.07612	0.11994	0.01970	0.04331	0.03482	0.05092
21	0.04905	0.10162	0.07926	0.12488	0.02275	0.05003	0.04022	0.05881
22	0.05107	0.10581	0.08253	0.13004	0.02582	0.05677	0.04564	0.06673
23	0.05318	0.11017	0.08593	0.13540	0.02890	0.06353	0.05107	0.07468
24	0.05537	0.11472	0.08948	0.14099	0.03197	0.07029	0.05651	0.08263
25	0.05766	0.11945	0.09317	0.14681	0.03504	0.07705	0.06194	0.09057
26	0.06004	0.12438	0.09701	0.15286	0.03811	0.08378	0.06735	0.09848
27	0.06242	0.12931	0.10086	0.15892	0.04116	0.09049	0.07274	0.10636
28	0.06480	0.13424	0.10470	0.16498	0.04419	0.09714	0.07809	0.11419
29	0.06718	0.13917	0.10855	0.17104	0.04719	0.10375	0.08340	0.12195
30	0.06955	0.14410	0.11239	0.17709	0.05016	0.11029	0.08866	0.12964
31	0.07193	0.14902	0.11623	0.18315	0.05310	0.11675	0.09385	0.13723
32	0.07431	0.15395	0.12008	0.18921	0.05600	0.12312	0.09897	0.14472
33	0.07669	0.15888	0.12392	0.19526	0.05885	0.12939	0.10402	0.15209
34	0.07907	0.16381	0.12777	0.20132	0.06165	0.13555	0.10897	0.15934
35	0.08145	0.16874	0.13161	0.20738	0.06440	0.14159	0.11382	0.16644
36	0.08383	0.17367	0.13546	0.21344	0.06709	0.14750	0.11857	0.17338
37	0.08621	0.17860	0.13930	0.21949	0.06971	0.15327	0.12321	0.18016
38	0.08859	0.18353	0.14314	0.22555	0.07226	0.15888	0.12772	0.18676
39	0.09097	0.18845	0.14699	0.23161	0.07474	0.16433	0.13210	0.19316
40	0.09335	0.19338	0.15083	0.23767	0.07714	0.16961	0.13635	0.19937
41	0.09572	0.19831	0.15468	0.24372	0.07946	0.17470	0.14044	0.20536
42	0.09810	0.20324	0.15852	0.24978	0.08169	0.17960	0.14438	0.21112
43	0.10048	0.20817	0.16237	0.25584	0.08383	0.18430	0.14816	0.21664
44	0.10286	0.21310	0.16621	0.26189	0.08587	0.18878	0.15176	0.22191
45	0.10524	0.21803	0.17005	0.26795	0.08780	0.19304	0.15519	0.22692
46	0.10762	0.22295	0.17390	0.27401	0.08964	0.19707	0.15842	0.23165
47	0.11000	0.22788	0.17774	0.28007	0.09136	0.20086	0.16147	0.23610
48	0.11238	0.23281	0.18159	0.28612	0.09296	0.20439	0.16431	0.24025
49	0.11476	0.23774	0.18543	0.29218	0.09445	0.20766	0.16694	0.24410
50	0.11714	0.24267	0.18927	0.29824	0.09582	0.21066	0.16935	0.24762
51	0.11951	0.24760	0.19312	0.30430	0.09705	0.21337	0.17153	0.25082
52	0.12189	0.25253	0.19696	0.31035	0.09815	0.21580	0.17348	0.25367
53	0.12427	0.25746	0.20081	0.31641	0.09912	0.21792	0.17519	0.25616
54	0.12665	0.26238	0.20465	0.32247	0.09995	0.21974	0.17665	0.25830
55	0.12903	0.26731	0.20850	0.32852	0.10063	0.22123	0.17785	0.26005
56	0.13141	0.27224	0.21234	0.33458	0.10116	0.22240	0.17878	0.26142
57	0.13379	0.27717	0.21618	0.34064	0.10153	0.22323	0.17945	0.26240
58	0.13617	0.28210	0.22003	0.34670	0.10175	0.22371	0.17984	0.26296
59	0.13855	0.28703	0.22387	0.35275	0.10181	0.22383	0.17993	0.26310
60	0.14093	0.29196	0.22772	0.35881	0.10170	0.22358	0.17974	0.26282
61	0.14331	0.29688	0.23156	0.36487	0.10141	0.22296	0.17924	0.26209
62	0.14568	0.30181	0.23541	0.37093	0.10113	0.22235	0.17874	0.26136
63	0.14806	0.30674	0.23925	0.37698	0.10085	0.22173	0.17825	0.26064
64	0.15048	0.31175	0.24316	0.38314	0.10057	0.22112	0.17775	0.25992
65	0.15294	0.31684	0.24713	0.38940	0.10029	0.22050	0.17726	0.25919

## OTHER LOSS RATES FROM PERMANENT DISABILITY

(Age Nearest Birthday)

<u>Age</u>	<u>Officer</u>	<u>Enlisted</u>	<u>Age</u>	<u>Officer</u>	<u>Enlisted</u>
16	0.06133	0.13158	54	0.00801	0.02973
17	0.06133	0.13158	55	0.00763	0.03066
18	0.06133	0.13158	56	0.00728	0.03112
19	0.06133	0.13158	57	0.00695	0.03112
20	0.06133	0.13158	58	0.00664	0.03064
21	0.06133	0.13158	59	0.00635	0.02981
22	0.06133	0.13158	60	0.00608	0.02871
23	0.06133	0.13158	61	0.00583	0.02747
24	0.04841	0.10386	62	0.00561	0.02615
25	0.04204	0.09019	63	0.00540	0.02479
26	0.03685	0.07907	64	0.00521	0.02344
27	0.03283	0.07043	65	0.00504	0.02215
28	0.02981	0.06396	66	0.00489	0.02102
29	0.02762	0.05925	67	0.00476	0.02009
30	0.02605	0.05588	68	0.00464	0.01944
31	0.02490	0.05342	69	0.00454	0.01906
32	0.02398	0.05145	70	0.00446	0.01889
33	0.02312	0.04961	71	0.00440	0.01883
34	0.02221	0.04766	72	0.00435	0.01875
35	0.02118	0.04544	73	0.00431	0.01852
36	0.02002	0.04296	74	0.00429	0.01805
37	0.01881	0.04036	75	0.00429	0.01738
38	0.01790	0.03780	76	0.00430	0.01665
39	0.01703	0.03553	77	0.00433	0.01610
40	0.01620	0.03363	78	0.00437	0.01594
41	0.01541	0.03216	79	0.00841	0.01643
42	0.01465	0.03100	80	0.00771	0.01775
43	0.01393	0.03006	81	0.00674	0.01993
44	0.01324	0.02916	82	0.00782	0.01661
45	0.01259	0.02826	83	0.00661	0.01661
46	0.01197	0.02737	84	0.00629	0.01661
47	0.01137	0.02661	85	0.00714	0.01661
48	0.01081	0.02601	86	0.00714	0.01661
49	0.01028	0.02575	87	0.00714	0.01661
50	0.00977	0.02588	88	0.00714	0.01661
51	0.00929	0.02644	89	0.00714	0.01661
52	0.00884	0.02738	90	0.00714	0.01661
53	0.00841	0.02857			

\*\*\* The above Other Loss rates are used to calculate the DoD NCP. Refer to Item 2 in the Retiree section of Appendix F for application to the Total NCP.

# RETIREE DIVORCE RATES

(Age Nearest Birthday)

Active			Reserve		
Age	Officer	Enlisted	Age	Officer	Enlisted
16	0.0727	0.1143	16	0.0000	0.0000
17	0.0727	0.1143	17	0.0000	0.0000
18	0.0727	0.1143	18	0.0000	0.0000
19	0.0502	0.0790	19	0.0000	0.0000
20	0.0502	0.0790	20	0.0000	0.0000
21	0.0502	0.0790	21	0.0000	0.0000
22	0.0502	0.0790	22	0.0000	0.0000
23	0.0502	0.0790	23	0.0000	0.0000
24	0.0502	0.0790	24	0.0000	0.0000
25	0.0502	0.0438	25	0.0000	0.0000
26	0.0502	0.0438	26	0.0000	0.0000
27	0.0502	0.0438	27	0.0000	0.0000
28	0.0502	0.0438	28	0.0000	0.0000
29	0.0502	0.0307	29	0.0000	0.0000
30	0.0502	0.0307	30	0.0000	0.0000
31	0.0502	0.0307	31	0.0000	0.0000
32	0.0435	0.0307	32	0.0000	0.0000
33	0.0435	0.0307	33	0.0000	0.0000
34	0.0434	0.0307	34	0.0000	0.0000
35	0.0434	0.0307	35	0.0000	0.0000
36	0.0408	0.0307	36	0.0000	0.0000
37	0.0408	0.0307	37	0.0000	0.0000
38	0.0408	0.0528	38	0.0000	0.0000
39	0.0408	0.0381	39	0.0000	0.0000
40	0.0408	0.0381	40	0.0000	0.0000
41	0.0263	0.0306	41	0.0000	0.0000
42	0.0235	0.0300	42	0.0000	0.0000
43	0.0208	0.0241	43	0.0000	0.0000
44	0.0183	0.0210	44	0.0000	0.0000
45	0.0159	0.0182	45	0.0000	0.0000
46	0.0138	0.0158	46	0.0000	0.0000
47	0.0118	0.0131	47	0.0000	0.0000
48	0.0092	0.0113	48	0.0000	0.0000
49	0.0076	0.0097	49	0.0000	0.0000
50	0.0062	0.0086	50	0.0000	0.0000
51	0.0050	0.0076	51	0.0000	0.0000
52	0.0046	0.0076	52	0.0000	0.0000
53	0.0039	0.0063	53	0.0000	0.0000
54	0.0026	0.0053	54	0.0000	0.0000
55	0.0021	0.0044	55	0.0000	0.0000
56	0.0017	0.0038	56	0.0000	0.0000
57	0.0014	0.0035	57	0.0000	0.0000
58	0.0011	0.0035	58	0.0000	0.0000
59	0.0009	0.0036	59	0.0000	0.0000
60	0.0009	0.0041	60	0.0109	0.0133
61	0.0005	0.0040	61	0.0079	0.0065
62	0.0002	0.0037	62	0.0269	0.0165
63	0.0000	0.0000	63	0.0062	0.0031
64	0.0000	0.0000	64	0.0000	0.0000
65	0.0000	0.0000	65	0.0000	0.0000
66	0.0000	0.0000	66	0.0000	0.0000
67	0.0000	0.0000	67	0.0000	0.0000
68	0.0000	0.0000	68	0.0000	0.0000
69	0.0000	0.0000	69	0.0000	0.0000
70	0.0000	0.0000	70	0.0000	0.0000
71	0.0000	0.0000	71	0.0000	0.0000
72	0.0000	0.0000	72	0.0000	0.0000
73	0.0000	0.0000	73	0.0000	0.0000
74	0.0000	0.0000	74	0.0000	0.0000
75	0.0000	0.0000	75	0.0000	0.0000
76	0.0000	0.0000	76	0.0000	0.0000
77	0.0000	0.0000	77	0.0000	0.0000
78	0.0000	0.0000	78	0.0000	0.0000
79	0.0000	0.0000	79	0.0000	0.0000
80	0.0000	0.0000	80	0.0000	0.0000
81	0.0000	0.0000	81	0.0000	0.0000
82	0.0000	0.0000	82	0.0000	0.0000

Note: Due to Section 647 of NDAA 2008 (P.L. 110-181) the reserve rates shown above apply in the early years of the projection. See Item 11 in the Reserve section in Appendix F for a description of the parameter used to model the phase-in to an average age 58 reserve retirement. As the transitions to earlier average retirement ages occur, the ages applicable to some of the rates change.



## SURVIVING SPOUSE REMARRIAGE RATES

(Age Nearest Birthday)

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
16	0.0634	38	0.0248
17	0.0634	39	0.0205
18	0.0634	40	0.0175
19	0.0634	41	0.0161
20	0.0634	42	0.0157
21	0.0634	43	0.0153
22	0.0634	44	0.0148
23	0.0634	45	0.0139
24	0.0634	46	0.0128
25	0.0634	47	0.0117
26	0.0634	48	0.0103
27	0.0598	49	0.0089
28	0.0573	50	0.0077
29	0.0558	51	0.0067
30	0.0548	52	0.0058
31	0.0538	53	0.0048
32	0.0523	54	0.0034
33	0.0500	55	0.0019
34	0.0465	56	0.0000
35	0.0418	57	0.0000
36	0.0362	58	0.0000
37	0.0303	59	0.0000

## CHILD TERMINATION RATES

(Age Nearest Birthday)

<u>Age</u>	<u>Rate</u>
0	0.005
1	0.000
2	0.000
3	0.000
4	0.000
5	0.000
6	0.000
7	0.000
8	0.000
9	0.000
10	0.000
11	0.000
12	0.000
13	0.000
14	0.000
15	0.000
16	0.000
17	0.224
18	0.306
19	0.227
20	0.185
21	0.384
22	0.734
23	0.068

# **SURVIVOR DEATH RATES**

(Age Nearest Birthday)

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
0	0.01316	55	0.00603
1	0.00118	56	0.00668
2	0.00077	57	0.00724
3	0.00057	58	0.00770
4	0.00043	59	0.00797
5	0.00039	60	0.00821
6	0.00036	61	0.00871
7	0.00034	62	0.00974
8	0.00030	63	0.01110
9	0.00029	64	0.01242
10	0.00029	65	0.01345
11	0.00031	66	0.01439
12	0.00033	67	0.01544
13	0.00036	68	0.01674
14	0.00043	69	0.01824
15	0.00050	70	0.01991
16	0.00056	71	0.02192
17	0.00061	72	0.02426
18	0.00063	73	0.02686
19	0.00064	74	0.02928
20	0.00064	75	0.03153
21	0.00064	76	0.03365
22	0.00063	77	0.03614
23	0.00064	78	0.03942
24	0.00063	79	0.04335
25	0.00064	80	0.04753
26	0.00067	81	0.05182
27	0.00069	82	0.05659
28	0.00075	83	0.06227
29	0.00075	84	0.06857
30	0.00080	85	0.07615
31	0.00086	86	0.08565
32	0.00097	87	0.09650
33	0.00102	88	0.10789
34	0.00111	89	0.11996
35	0.00113	90	0.13299
36	0.00122	91	0.14725
37	0.00127	92	0.16296
38	0.00133	93	0.17988
39	0.00145	94	0.19750
40	0.00157	95	0.21509
41	0.00171	96	0.23221
42	0.00183	97	0.24894
43	0.00196	98	0.26560
44	0.00204	99	0.28274
45	0.00215	100	0.30130
46	0.00226	101	0.32191
47	0.00241	102	0.34489
48	0.00263	103	0.37042
49	0.00286	104	0.39504
50	0.00316	105	0.41975
51	0.00352	106	0.44340
52	0.00398	107	0.46488
53	0.00448	108	0.48613
54	0.00530	109	0.50823

# **SURVIVOR OTHER LOSS RATES**

(Age Nearest Birthday)

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
0	0.00000	55	0.01061
1	0.00000	56	0.01061
2	0.00000	57	0.00962
3	0.00000	58	0.00522
4	0.00000	59	0.00709
5	0.00000	60	0.01195
6	0.00000	61	0.00927
7	0.00000	62	0.00681
8	0.00000	63	0.00981
9	0.00000	64	0.00546
10	0.00000	65	0.00699
11	0.00000	66	0.00692
12	0.00000	67	0.00651
13	0.00000	68	0.00668
14	0.00000	69	0.00718
15	0.00000	70	0.00564
16	0.00000	71	0.00570
17	0.00000	72	0.00468
18	0.00000	73	0.00538
19	0.00000	74	0.00436
20	0.00000	75	0.00384
21	0.00000	76	0.00512
22	0.00000	77	0.00439
23	0.00000	78	0.00439
24	0.00000	79	0.00439
25	0.00000	80	0.00439
26	0.00000	81	0.00439
27	0.01811	82	0.00439
28	0.01811	83	0.00407
29	0.01811	84	0.00407
30	0.01811	85	0.00407
31	0.01811	86	0.00407
32	0.01811	87	0.00407
33	0.01811	88	0.00407
34	0.01811	89	0.00619
35	0.01811	90	0.00619
36	0.01811	91	0.00619
37	0.01811	92	0.00619
38	0.01811	93	0.00619
39	0.01749	94	0.00619
40	0.01749	95	0.00619
41	0.01749	96	0.00000
42	0.01749	97	0.00000
43	0.01749	98	0.00000
44	0.01642	99	0.00000
45	0.01642	100	0.00000
46	0.01211	101	0.00000
47	0.01211	102	0.00000
48	0.01211	103	0.00000
49	0.01211	104	0.00000
50	0.01211	105	0.00000
51	0.01211	106	0.00000
52	0.01211	107	0.00000
53	0.01061	108	0.00000
54	0.01061	109	0.00000

APPENDIX J

MORTALITY IMPROVEMENT FACTORS

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## **MORTALITY IMPROVEMENT FACTORS**

Mortality rates in the valuation for active (non-reserve) military, nondisabled retirees, and survivor beneficiaries are decreased (or “improved”) over time in order to reflect the long-term trend toward such declines. No mortality improvement is assumed for disabled retirees because their mortality patterns are too easily affected by economic variables, periods of war, and by the policies of administering the disability retirement program (i.e., periods of relative laxity or stringency in determining an individual’s degree of disability or recovery from disability).

Mortality improvement factors were formed using data from the Social Security Administration. The Social Security Administration projects mortality rates by age and sex for each quinquennial year of their valuation projection period through the year 2080. We used the rates which underlie the 2000 Trustee’s Report, Alternative II (II-A and II-B had identical mortality assumptions).

To construct military mortality improvement factors, the corresponding combined sex tables were constructed. Mortality improvement factors were then computed by taking the fifth root of the ratio between (1) the combined sex mortality rate for a given age and year and (2) combined sex mortality rate for the same age five years earlier. Improvement rates for each of the five sets after the final year displayed (2089) is set to 0.5%, or a factor of 0.995. Five sets of values for the percent of females were used: active duty officers, active duty enlistees, nondisabled retired officers, nondisabled retired enlistees, and survivors. For each set, the percent of females was both age- and year-specific, with the initial percent taken from the September 1999 military files. There are consequently five sets of mortality improvement factors used in the valuation of the military retirement system.

Even though the mortality improvement factors are based on Social Security data, they should apply reasonably well to the military retirement system. While the average military person may be somewhat healthier than the average person in the Social Security population, the mortality improvement factors are in the form of percentages. If the mortality for relatively healthy military lives is already small, then the improvement in terms of fewer deaths is slight, even though the percentage improvement is the same as for relatively less healthy lives.

# Active Officer Mortality Improvement Rates

Age	1990-94	1995-99	2000-04	2005-09	2010-14	2015-19	2020-24	2025-29	2030-34	2035-39	2040-44	2045-49	2050-54	2055-59	2060-64	2065-69	2070-74	2075-79	2080-84	2085-89
16	0.96223	0.99444	0.98901	0.98908	0.99008	0.99127	0.99191	0.99199	0.99210	0.99204	0.99228	0.99207	0.99205	0.99246	0.99184	0.99264	0.99223	0.99205	0.99500	0.99500
17	0.96158	0.99454	0.98899	0.98913	0.99028	0.99118	0.99214	0.99211	0.99200	0.99222	0.99246	0.99208	0.99237	0.99243	0.99223	0.99240	0.99250	0.99221	0.99500	0.99500
18	0.96201	0.99452	0.98829	0.98850	0.99001	0.99113	0.99223	0.99191	0.99205	0.99222	0.99257	0.99205	0.99252	0.99241	0.99193	0.99258	0.99247	0.99228	0.99500	0.99500
19	0.96346	0.99428	0.98730	0.98750	0.98918	0.99108	0.99206	0.99192	0.99210	0.99219	0.99230	0.99214	0.99235	0.99246	0.99207	0.99261	0.99223	0.99239	0.99500	0.99500
20	0.97264	0.99404	0.98618	0.98658	0.98837	0.99082	0.99203	0.99200	0.99179	0.99231	0.99214	0.99225	0.99216	0.99246	0.99208	0.99243	0.99230	0.99263	0.99500	0.99500
21	0.99555	0.99389	0.98523	0.98585	0.98779	0.99083	0.99176	0.99199	0.99196	0.99214	0.99209	0.99210	0.99228	0.99228	0.99235	0.99230	0.99231	0.99262	0.99500	0.99500
22	0.98723	0.99355	0.98474	0.98538	0.98755	0.99064	0.99158	0.99214	0.99193	0.99229	0.99185	0.99204	0.99242	0.99220	0.99226	0.99243	0.99221	0.99250	0.99500	0.99500
23	0.99057	0.99304	0.98463	0.98554	0.98743	0.99062	0.99174	0.99192	0.99195	0.99228	0.99177	0.99225	0.99221	0.99218	0.99227	0.99233	0.99246	0.99250	0.99500	0.99500
24	0.98909	0.99236	0.98505	0.98595	0.98754	0.99084	0.99143	0.99217	0.99181	0.99214	0.99207	0.99211	0.99234	0.99226	0.99219	0.99237	0.99237	0.99266	0.99500	0.99500
25	0.98604	0.99156	0.98522	0.98636	0.98789	0.99060	0.99154	0.99195	0.99200	0.99212	0.99205	0.99215	0.99211	0.99231	0.99219	0.99249	0.99241	0.99244	0.99500	0.99500
26	0.98533	0.99090	0.98544	0.98669	0.98798	0.99073	0.99152	0.99195	0.99205	0.99193	0.99206	0.99222	0.99214	0.99235	0.99209	0.99250	0.99232	0.99252	0.99500	0.99500
27	0.98665	0.99085	0.98576	0.98727	0.98824	0.99074	0.99153	0.99192	0.99202	0.99189	0.99202	0.99241	0.99192	0.99235	0.99205	0.99250	0.99253	0.99253	0.99500	0.99500
28	0.99039	0.99176	0.98601	0.98797	0.98884	0.99098	0.99157	0.99176	0.99202	0.99193	0.99222	0.99216	0.99192	0.99249	0.99204	0.99268	0.99250	0.99243	0.99500	0.99500
29	0.99396	0.99322	0.98650	0.98855	0.98947	0.99122	0.99161	0.99178	0.99183	0.99209	0.99217	0.99213	0.99228	0.99219	0.99234	0.99257	0.99258	0.99255	0.99500	0.99500
30	1.00141	0.99466	0.98677	0.98921	0.99015	0.99119	0.99169	0.99189	0.99187	0.99196	0.99222	0.99213	0.99226	0.99237	0.99233	0.99252	0.99267	0.99247	0.99500	0.99500
31	1.00653	0.99595	0.98692	0.98978	0.99058	0.99131	0.99176	0.99178	0.99178	0.99198	0.99240	0.99191	0.99245	0.99212	0.99268	0.99243	0.99282	0.99259	0.99500	0.99500
32	1.01184	0.99716	0.98681	0.98990	0.99066	0.99138	0.99170	0.99164	0.99194	0.99199	0.99223	0.99207	0.99236	0.99228	0.99258	0.99253	0.99246	0.99288	0.99500	0.99500
33	1.00997	0.99834	0.98644	0.98946	0.99055	0.99113	0.99168	0.99164	0.99176	0.99194	0.99229	0.99198	0.99225	0.99231	0.99262	0.99257	0.99249	0.99270	0.99500	0.99500
34	1.01052	0.99927	0.98569	0.98882	0.98996	0.99114	0.99136	0.99173	0.99172	0.99187	0.99201	0.99204	0.99229	0.99235	0.99245	0.99258	0.99270	0.99270	0.99500	0.99500
35	1.00877	1.00009	0.98507	0.98795	0.98941	0.99090	0.99123	0.99156	0.99169	0.99181	0.99192	0.99212	0.99216	0.99240	0.99231	0.99260	0.99251	0.99290	0.99500	0.99500
36	1.00679	1.00058	0.98422	0.98713	0.98899	0.99064	0.99119	0.99136	0.99172	0.99167	0.99193	0.99196	0.99211	0.99231	0.99241	0.99269	0.99241	0.99276	0.99500	0.99500
37	1.00625	1.00077	0.98359	0.98650	0.98841	0.99038	0.99112	0.99137	0.99157	0.99163	0.99186	0.99200	0.99201	0.99234	0.99240	0.99250	0.99256	0.99271	0.99500	0.99500
38	1.00924	1.00052	0.98305	0.98590	0.98802	0.99027	0.99105	0.99126	0.99141	0.99158	0.99175	0.99202	0.99198	0.99228	0.99233	0.99257	0.99245	0.99292	0.99500	0.99500
39	1.01129	0.99994	0.98256	0.98534	0.98778	0.99006	0.99096	0.99123	0.99135	0.99158	0.99165	0.99194	0.99194	0.99232	0.99233	0.99255	0.99259	0.99268	0.99500	0.99500
40	1.01560	0.99912	0.98228	0.98487	0.98752	0.99005	0.99088	0.99110	0.99138	0.99158	0.99171	0.99188	0.99196	0.99229	0.99229	0.99262	0.99262	0.99271	0.99500	0.99500
41	1.01690	0.99814	0.98190	0.98445	0.98724	0.98991	0.99092	0.99103	0.99134	0.99149	0.99173	0.99183	0.99203	0.99229	0.99228	0.99259	0.99267	0.99275	0.99500	0.99500
42	1.01581	0.99702	0.98138	0.98392	0.98685	0.98971	0.99068	0.99090	0.99127	0.99139	0.99167	0.99175	0.99202	0.99216	0.99234	0.99234	0.99269	0.99273	0.99500	0.99500
43	1.01315	0.99582	0.98071	0.98313	0.98622	0.98939	0.99051	0.99068	0.99107	0.99124	0.99149	0.99162	0.99187	0.99206	0.99222	0.99234	0.99246	0.99253	0.99500	0.99500
44	1.00912	0.99457	0.98001	0.98235	0.98557	0.98894	0.99027	0.99055	0.99079	0.99101	0.99130	0.99140	0.99179	0.99186	0.99210	0.99228	0.99245	0.99256	0.99500	0.99500
45	1.00420	0.99337	0.97940	0.98167	0.98494	0.98857	0.99003	0.99026	0.99059	0.99086	0.99101	0.99132	0.99158	0.99173	0.99191	0.99217	0.99241	0.99241	0.99500	0.99500
46	1.00093	0.99219	0.97904	0.98122	0.98455	0.98836	0.98980	0.99020	0.99038	0.99075	0.99094	0.99121	0.99149	0.99162	0.99186	0.99218	0.99229	0.99249	0.99500	0.99500
47	0.99849	0.99061	0.97891	0.98098	0.98441	0.98835	0.98976	0.99016	0.99045	0.99076	0.99091	0.99121	0.99146	0.99173	0.99193	0.99211	0.99232	0.99256	0.99500	0.99500
48	0.99756	0.98874	0.97912	0.98110	0.98446	0.98850	0.98991	0.99037	0.99063	0.99084	0.99115	0.99136	0.99165	0.99179	0.99206	0.99229	0.99246	0.99268	0.99500	0.99500
49	0.99701	0.98674	0.97948	0.98133	0.98479	0.98877	0.99020	0.99062	0.99084	0.99114	0.99136	0.99161	0.99185	0.99205	0.99228	0.99240	0.99263	0.99289	0.99500	0.99500
50	0.99620	0.98500	0.97994	0.98172	0.98520	0.98902	0.99045	0.99088	0.99119	0.99133	0.99163	0.99186	0.99199	0.99229	0.99243	0.99267	0.99279	0.99301	0.99500	0.99500
51	0.99495	0.98365	0.98039	0.98210	0.98550	0.98927	0.99065	0.99112	0.99134	0.99155	0.99175	0.99206	0.99217	0.99243	0.99260	0.99273	0.99290	0.99316	0.99500	0.99500
52	0.99103	0.98262	0.98082	0.98245	0.98585	0.98953	0.99081	0.99125	0.99148	0.99166	0.99191	0.99218	0.99226	0.99253	0.99274	0.99290	0.99298	0.99325	0.99500	0.99500
53	0.98808	0.98184	0.98119	0.98279	0.98615	0.98970	0.99092	0.99133	0.99160	0.99174	0.99200	0.99222	0.99237	0.99261	0.99278	0.99296	0.99312	0.99331	0.99500	0.99500
54	0.98561	0.98131	0.98157	0.98319	0.98646	0.98988	0.99101	0.99136	0.99162	0.99183	0.99205	0.99223	0.99243	0.99267	0.99285	0.99300	0.99314	0.99340	0.99500	0.99500
55	0.98280	0.98099	0.98207	0.98364	0.98684	0.99007	0.99113	0.99142	0.99165	0.99190	0.99211	0.99229	0.99249	0.99272	0.99288	0.99308	0.99323	0.99340	0.99500	0.99500
56	0.98083	0.98090	0.98264	0.98419	0.98725	0.99029	0.99118	0.99153	0.99169	0.99192	0.99219	0.99239	0.99252	0.99279	0.99294	0.99315	0.99327	0.99345	0.99500	0.99500
57	0.97982	0.98109	0.98313	0.98469	0.98760	0.99044	0.99125	0.99154	0.99171	0.99198	0.99222	0.99238	0.99257	0.99279	0.99298	0.99318	0.99331	0.99345	0.99500	0.99500
58	0.97979	0.98153	0.98356	0.98507	0.98791	0.99050	0.99127	0.99152	0.99171	0.99198	0.99220	0.99240	0.99258	0.99279	0.99296	0.99319	0.99332	0.99347	0.99500	0.99500
59	0.98034	0.98215	0.98398	0.98546	0.98819	0.99057	0.99125	0.99148	0.99172	0.99195	0.99220	0.99238	0.99257	0.99279	0.99299	0.99318	0.99330	0.99348	0.99500	0.99500
60	0.98095	0.98264	0.98434	0.98579	0.98843	0.99062	0.99119	0.99147	0.99169	0.99194	0.99215	0.99239	0.99258	0.99278	0.99296	0.99317	0.99332	0.99349	0.99500	0.99500

# Active Enlisted Mortality Improvement Rates

Age	1990-94	1995-99	2000-04	2005-09	2010-14	2015-19	2020-24	2025-29	2030-34	2035-39	2040-44	2045-49	2050-54	2055-59	2060-64	2065-69	2070-74	2075-79	2080-84	2085-89
16	0.97747	0.99437	0.98902	0.98908	0.99009	0.99127	0.99192	0.99198	0.99210	0.99204	0.99227	0.99207	0.99205	0.99246	0.99184	0.99264	0.99223	0.99205	0.99500	0.99500
17	0.97731	0.99448	0.98899	0.98913	0.99029	0.99119	0.99214	0.99211	0.99201	0.99222	0.99247	0.99208	0.99237	0.99243	0.99223	0.99239	0.99250	0.99221	0.99500	0.99500
18	0.97822	0.99448	0.98826	0.98846	0.98996	0.99107	0.99222	0.99191	0.99204	0.99221	0.99258	0.99205	0.99253	0.99237	0.99193	0.99256	0.99249	0.99227	0.99500	0.99500
19	0.98258	0.99425	0.98729	0.98748	0.98913	0.99104	0.99203	0.99189	0.99213	0.99215	0.99228	0.99215	0.99236	0.99241	0.99206	0.99259	0.99225	0.99235	0.99500	0.99500
20	0.98746	0.99406	0.98621	0.98658	0.98835	0.99081	0.99199	0.99200	0.99183	0.99226	0.99212	0.99225	0.99217	0.99243	0.99208	0.99238	0.99230	0.99261	0.99500	0.99500
21	0.99021	0.99397	0.98528	0.98590	0.98781	0.99083	0.99174	0.99197	0.99198	0.99212	0.99205	0.99211	0.99228	0.99225	0.99237	0.99221	0.99232	0.99261	0.99500	0.99500
22	0.99222	0.99366	0.98481	0.98545	0.98758	0.99066	0.99156	0.99212	0.99195	0.99228	0.99180	0.99205	0.99243	0.99217	0.99228	0.99236	0.99222	0.99249	0.99500	0.99500
23	0.99181	0.99308	0.98465	0.98557	0.98743	0.99063	0.99173	0.99191	0.99195	0.99228	0.99176	0.99226	0.99221	0.99217	0.99228	0.99231	0.99247	0.99249	0.99500	0.99500
24	0.98905	0.99235	0.98507	0.98597	0.98754	0.99084	0.99142	0.99217	0.99181	0.99213	0.99206	0.99212	0.99233	0.99225	0.99218	0.99216	0.99237	0.99266	0.99500	0.99500
25	0.98521	0.99153	0.98523	0.98636	0.98789	0.99060	0.99154	0.99195	0.99200	0.99211	0.99204	0.99215	0.99210	0.99230	0.99219	0.99249	0.99241	0.99244	0.99500	0.99500
26	0.98403	0.99084	0.98544	0.98669	0.98797	0.99073	0.99152	0.99195	0.99205	0.99193	0.99206	0.99222	0.99214	0.99235	0.99209	0.99250	0.99231	0.99252	0.99500	0.99500
27	0.98495	0.99080	0.98576	0.98727	0.98824	0.99074	0.99153	0.99192	0.99202	0.99189	0.99202	0.99241	0.99191	0.99234	0.99204	0.99250	0.99253	0.99252	0.99500	0.99500
28	0.98987	0.99168	0.98602	0.98797	0.98885	0.99098	0.99157	0.99176	0.99202	0.99193	0.99222	0.99216	0.99192	0.99249	0.99203	0.99268	0.99249	0.99243	0.99500	0.99500
29	0.99631	0.99312	0.98650	0.98856	0.98948	0.99122	0.99161	0.99178	0.99183	0.99209	0.99217	0.99213	0.99227	0.99219	0.99234	0.99257	0.99257	0.99255	0.99500	0.99500
30	1.00301	0.99453	0.98678	0.98921	0.99015	0.99119	0.99169	0.99189	0.99188	0.99195	0.99222	0.99213	0.99226	0.99237	0.99233	0.99252	0.99267	0.99247	0.99500	0.99500
31	1.00879	0.99583	0.98692	0.98979	0.99058	0.99131	0.99176	0.99178	0.99178	0.99198	0.99240	0.99191	0.99244	0.99212	0.99268	0.99243	0.99282	0.99258	0.99500	0.99500
32	1.01055	0.99704	0.98683	0.98992	0.99067	0.99138	0.99169	0.99164	0.99194	0.99199	0.99223	0.99207	0.99236	0.99228	0.99258	0.99253	0.99246	0.99288	0.99500	0.99500
33	1.01085	0.99819	0.98647	0.98950	0.99057	0.99113	0.99168	0.99164	0.99176	0.99193	0.99229	0.99198	0.99224	0.99231	0.99262	0.99256	0.99249	0.99270	0.99500	0.99500
34	1.00929	0.99919	0.98572	0.98887	0.98998	0.99114	0.99136	0.99173	0.99171	0.99186	0.99204	0.99229	0.99234	0.99245	0.99245	0.99257	0.99270	0.99269	0.99500	0.99500
35	1.00747	1.00002	0.98511	0.98799	0.98944	0.99091	0.99123	0.99156	0.99168	0.99180	0.99192	0.99212	0.99216	0.99239	0.99230	0.99259	0.99251	0.99289	0.99500	0.99500
36	1.00467	1.00053	0.98426	0.98718	0.98902	0.99065	0.99118	0.99135	0.99171	0.99166	0.99193	0.99194	0.99210	0.99231	0.99240	0.99268	0.99240	0.99275	0.99500	0.99500
37	1.00538	1.00069	0.98364	0.98656	0.98844	0.99038	0.99111	0.99136	0.99156	0.99162	0.99185	0.99199	0.99199	0.99233	0.99239	0.99248	0.99256	0.99269	0.99500	0.99500
38	1.00719	1.00049	0.98309	0.98596	0.98805	0.99027	0.99104	0.99125	0.99140	0.99157	0.99174	0.99201	0.99197	0.99228	0.99232	0.99256	0.99244	0.99291	0.99500	0.99500
39	1.01079	0.99993	0.98260	0.98538	0.98781	0.99006	0.99095	0.99123	0.99134	0.99158	0.99164	0.99194	0.99193	0.99231	0.99233	0.99254	0.99258	0.99267	0.99500	0.99500
40	1.01471	0.99913	0.98230	0.98490	0.98753	0.99005	0.99087	0.99109	0.99138	0.99157	0.99171	0.99188	0.99195	0.99228	0.99229	0.99262	0.99261	0.99270	0.99500	0.99500
41	1.01677	0.99816	0.98195	0.98450	0.98727	0.98991	0.99091	0.99101	0.99133	0.99148	0.99171	0.99182	0.99201	0.99229	0.99227	0.99257	0.99267	0.99273	0.99500	0.99500
42	1.01715	0.99706	0.98139	0.98393	0.98686	0.98971	0.99068	0.99090	0.99126	0.99139	0.99167	0.99175	0.99202	0.99216	0.99234	0.99234	0.99269	0.99272	0.99500	0.99500
43	1.01421	0.99586	0.98073	0.98316	0.98624	0.98938	0.99050	0.99067	0.99106	0.99124	0.99148	0.99161	0.99186	0.99205	0.99222	0.99233	0.99263	0.99252	0.99500	0.99500
44	1.00934	0.99460	0.98002	0.98236	0.98557	0.98894	0.99026	0.99054	0.99078	0.99100	0.99129	0.99140	0.99178	0.99185	0.99209	0.99228	0.99244	0.99255	0.99500	0.99500
45	1.00440	0.99340	0.97940	0.98168	0.98494	0.98856	0.99002	0.99025	0.99058	0.99085	0.99099	0.99131	0.99157	0.99172	0.99190	0.99216	0.99241	0.99239	0.99500	0.99500
46	1.00083	0.99219	0.97904	0.98122	0.98455	0.98836	0.98980	0.99019	0.99038	0.99075	0.99094	0.99121	0.99148	0.99162	0.99186	0.99218	0.99229	0.99249	0.99500	0.99500
47	0.99656	0.99059	0.97891	0.98098	0.98442	0.98836	0.98977	0.99017	0.99046	0.99077	0.99091	0.99122	0.99147	0.99173	0.99194	0.99212	0.99232	0.99256	0.99500	0.99500
48	0.99558	0.98873	0.97911	0.98110	0.98446	0.98850	0.98991	0.99037	0.99063	0.99084	0.99115	0.99136	0.99164	0.99179	0.99205	0.99229	0.99246	0.99268	0.99500	0.99500
49	0.99504	0.98675	0.97949	0.98135	0.98480	0.98878	0.99021	0.99063	0.99085	0.99115	0.99137	0.99162	0.99186	0.99206	0.99229	0.99241	0.99264	0.99290	0.99500	0.99500
50	0.99210	0.98506	0.97994	0.98172	0.98520	0.98902	0.99045	0.99088	0.99119	0.99133	0.99163	0.99186	0.99199	0.99229	0.99243	0.99267	0.99279	0.99301	0.99500	0.99500
51	0.99085	0.98373	0.98057	0.98226	0.98560	0.98933	0.99070	0.99117	0.99139	0.99160	0.99181	0.99211	0.99222	0.99248	0.99265	0.99277	0.99294	0.99320	0.99500	0.99500
52	0.98882	0.98268	0.98102	0.98264	0.98597	0.98959	0.99086	0.99130	0.99153	0.99171	0.99196	0.99223	0.99231	0.99257	0.99278	0.99294	0.99302	0.99329	0.99500	0.99500
53	0.98598	0.98193	0.98142	0.98299	0.98628	0.98977	0.99097	0.99138	0.99165	0.99179	0.99205	0.99226	0.99242	0.99265	0.99282	0.99299	0.99316	0.99334	0.99500	0.99500
54	0.98294	0.98145	0.98177	0.98337	0.98659	0.98994	0.99105	0.99140	0.99165	0.99187	0.99209	0.99227	0.99246	0.99270	0.99289	0.99303	0.99317	0.99342	0.99500	0.99500
55	0.98016	0.98116	0.98229	0.98384	0.98697	0.99013	0.99117	0.99145	0.99168	0.99194	0.99215	0.99232	0.99252	0.99275	0.99291	0.99311	0.99326	0.99342	0.99500	0.99500
56	0.97821	0.98109	0.98287	0.98440	0.98740	0.99036	0.99122	0.99157	0.99173	0.99196	0.99222	0.99243	0.99255	0.99282	0.99298	0.99318	0.99329	0.99347	0.99500	0.99500
57	0.97721	0.98129	0.98337	0.98491	0.98776	0.99051	0.99129	0.99157	0.99174	0.99201	0.99225	0.99242	0.99261	0.99282	0.99301	0.99321	0.99334	0.99348	0.99500	0.99500
58	0.97718	0.98173	0.98381	0.98530	0.98808	0.99057	0.99130	0.99155	0.99174	0.99201	0.99222	0.99243	0.99261	0.99281	0.99299	0.99322	0.99335	0.99349	0.99500	0.99500
59	0.97773	0.98234	0.98424	0.98571	0.98837	0.99063	0.99128	0.99151	0.99174	0.99198	0.99222	0.99241	0.99260	0.99281	0.99301	0.99320	0.99332	0.99350	0.99500	0.99500
60	0.97834	0.98282	0.98461	0.98604	0.98861	0.99068	0.99122	0.99149	0.99171	0.99196	0.99217	0.99241	0.99260	0.99280	0.99298	0.99319	0.99333	0.99351	0.99500	0.99500



**Nondisabled Retired Officer Mortality Improvement Rates**

Age	1990-94	1995-99	2000-04	2005-09	2010-14	2015-19	2020-24	2025-29	2030-34	2035-39	2040-44	2045-49	2050-54	2055-59	2060-64	2065-69	2070-74	2075-79	2080-84	2085-89
16	0.97729	0.99418	0.98884	0.99057	0.99101	0.99124	0.99188	0.99203	0.99205	0.99202	0.99231	0.99204	0.99204	0.99245	0.99179	0.99262	0.99229	0.99202	0.99500	0.99500
17	0.97719	0.99433	0.98881	0.99069	0.99129	0.99108	0.99216	0.99208	0.99199	0.99219	0.99243	0.99210	0.99238	0.99241	0.99214	0.99242	0.99249	0.99220	0.99500	0.99500
18	0.97816	0.99437	0.98813	0.99014	0.99108	0.99106	0.99224	0.99190	0.99203	0.99218	0.99259	0.99205	0.99253	0.99231	0.99193	0.99254	0.99251	0.99226	0.99500	0.99500
19	0.98020	0.99421	0.98717	0.98926	0.99035	0.99108	0.99203	0.99188	0.99215	0.99212	0.99226	0.99216	0.99237	0.99238	0.99204	0.99259	0.99226	0.99233	0.99500	0.99500
20	0.98250	0.99407	0.98611	0.98846	0.98964	0.99088	0.99199	0.99200	0.99184	0.99223	0.99212	0.99225	0.99218	0.99242	0.99208	0.99236	0.99230	0.99261	0.99500	0.99500
21	0.98438	0.99400	0.98518	0.98785	0.98916	0.99091	0.99176	0.99196	0.99199	0.99211	0.99203	0.99211	0.99228	0.99223	0.99238	0.99218	0.99233	0.99262	0.99500	0.99500
22	0.98491	0.99368	0.98471	0.98743	0.98895	0.99075	0.99158	0.99212	0.99197	0.99228	0.99179	0.99206	0.99243	0.99216	0.99229	0.99233	0.99223	0.99249	0.99500	0.99500
23	0.98351	0.99310	0.98456	0.98752	0.98878	0.99072	0.99175	0.99191	0.99196	0.99227	0.99175	0.99226	0.99220	0.99215	0.99228	0.99229	0.99248	0.99249	0.99500	0.99500
24	0.98113	0.99234	0.98497	0.98784	0.98884	0.99093	0.99143	0.99216	0.99182	0.99213	0.99205	0.99232	0.99232	0.99225	0.99218	0.99236	0.99236	0.99265	0.99500	0.99500
25	0.97805	0.99149	0.98513	0.98815	0.98912	0.99068	0.99155	0.99194	0.99200	0.99211	0.99203	0.99215	0.99209	0.99228	0.99219	0.99247	0.99242	0.99243	0.99500	0.99500
26	0.97603	0.99078	0.98535	0.98839	0.98914	0.99081	0.99154	0.99195	0.99204	0.99192	0.99206	0.99221	0.99214	0.99234	0.99206	0.99251	0.99229	0.99252	0.99500	0.99500
27	0.97680	0.99074	0.98567	0.98891	0.98938	0.99080	0.99154	0.99192	0.99201	0.99189	0.99202	0.99241	0.99190	0.99233	0.99202	0.99250	0.99252	0.99252	0.99500	0.99500
28	0.98090	0.99163	0.98593	0.98958	0.98997	0.99104	0.99158	0.99176	0.99202	0.99192	0.99223	0.99216	0.99190	0.99249	0.99249	0.99269	0.99248	0.99243	0.99500	0.99500
29	0.98679	0.99308	0.98642	0.99015	0.99060	0.99129	0.99162	0.99178	0.99209	0.99218	0.99212	0.99227	0.99218	0.99234	0.99231	0.99256	0.99257	0.99254	0.99500	0.99500
30	0.99324	0.99453	0.98670	0.99080	0.99126	0.99171	0.99189	0.99188	0.99195	0.99222	0.99213	0.99225	0.99225	0.99237	0.99232	0.99252	0.99268	0.99246	0.99500	0.99500
31	0.99842	0.99584	0.98683	0.99135	0.99169	0.99138	0.99178	0.99198	0.99240	0.99191	0.99244	0.99211	0.99244	0.99211	0.99267	0.99242	0.99282	0.99258	0.99500	0.99500
32	1.00153	0.99706	0.98673	0.99144	0.99175	0.99145	0.99171	0.99164	0.99195	0.99199	0.99222	0.99207	0.99236	0.99227	0.99257	0.99253	0.99246	0.99288	0.99500	0.99500
33	1.00193	0.99821	0.98636	0.99096	0.99163	0.99120	0.99170	0.99164	0.99176	0.99193	0.99229	0.99198	0.99224	0.99231	0.99262	0.99257	0.99249	0.99269	0.99500	0.99500
34	1.00075	0.99921	0.98561	0.99027	0.99100	0.99120	0.99138	0.99173	0.99171	0.99186	0.99201	0.99204	0.99229	0.99234	0.99244	0.99257	0.99270	0.99269	0.99500	0.99500
35	0.99870	1.00005	0.98499	0.98934	0.99041	0.99096	0.99125	0.99156	0.99168	0.99180	0.99192	0.99212	0.99216	0.99240	0.99230	0.99260	0.99251	0.99289	0.99500	0.99500
36	0.99744	1.00055	0.98415	0.98848	0.98996	0.99070	0.99120	0.99135	0.99171	0.99166	0.99193	0.99194	0.99210	0.99231	0.99240	0.99268	0.99240	0.99275	0.99500	0.99500
37	0.99833	1.00072	0.98352	0.98783	0.98937	0.99044	0.99113	0.99137	0.99156	0.99162	0.99185	0.99200	0.99200	0.99234	0.99239	0.99249	0.99256	0.99270	0.99500	0.99500
38	1.00181	1.00051	0.98297	0.98722	0.98897	0.99032	0.99106	0.99125	0.99140	0.99157	0.99175	0.99201	0.99198	0.99228	0.99233	0.99256	0.99245	0.99291	0.99500	0.99500
39	1.00658	0.99994	0.98247	0.98665	0.98873	0.99011	0.99097	0.99123	0.99134	0.99158	0.99164	0.99194	0.99193	0.99232	0.99233	0.99255	0.99258	0.99267	0.99500	0.99500
40	1.01191	0.99913	0.98219	0.98619	0.98847	0.99010	0.99089	0.99109	0.99137	0.99157	0.99171	0.99187	0.99195	0.99229	0.99229	0.99261	0.99270	0.99500	0.99500	0.99500
41	1.01707	0.99817	0.98074	0.98553	0.98850	0.98889	0.99121	0.99103	0.99136	0.99150	0.99172	0.99180	0.99201	0.99229	0.99228	0.99257	0.99267	0.99274	0.99500	0.99500
42	1.01884	0.99709	0.98054	0.98441	0.98768	0.98882	0.99104	0.99093	0.99131	0.99141	0.99167	0.99173	0.99202	0.99217	0.99235	0.99234	0.99269	0.99272	0.99500	0.99500
43	1.01484	0.99590	0.97956	0.98336	0.98674	0.98920	0.99049	0.99070	0.99111	0.99128	0.99147	0.99160	0.99185	0.99206	0.99223	0.99234	0.99263	0.99252	0.99500	0.99500
44	1.01080	0.99466	0.97867	0.98264	0.98601	0.98919	0.98976	0.99070	0.99083	0.99106	0.99127	0.99138	0.99177	0.99186	0.99210	0.99228	0.99244	0.99255	0.99500	0.99500
45	1.00719	0.99351	0.97766	0.98180	0.98529	0.98878	0.98951	0.99052	0.99063	0.99091	0.99099	0.99131	0.99157	0.99173	0.99192	0.99217	0.99241	0.99240	0.99500	0.99500
46	1.00240	0.99227	0.97684	0.98104	0.98484	0.98857	0.98941	0.99038	0.99042	0.99079	0.99092	0.99120	0.99147	0.99162	0.99186	0.99218	0.99228	0.99248	0.99500	0.99500
47	1.00074	0.99069	0.97601	0.98074	0.98462	0.98860	0.98938	0.99036	0.99049	0.99081	0.99091	0.99121	0.99145	0.99173	0.99194	0.99212	0.99232	0.99255	0.99500	0.99500
48	0.99924	0.98877	0.97622	0.98060	0.98461	0.98876	0.98973	0.99043	0.99068	0.99089	0.99118	0.99135	0.99164	0.99180	0.99207	0.99230	0.99247	0.99269	0.99500	0.99500
49	0.99813	0.98672	0.97610	0.98068	0.98498	0.98904	0.99025	0.99039	0.99096	0.99120	0.99140	0.99161	0.99185	0.99206	0.99230	0.99242	0.99265	0.99290	0.99500	0.99500
50	0.99801	0.98491	0.97618	0.98078	0.98534	0.98927	0.99055	0.99058	0.99139	0.99168	0.99187	0.99200	0.99231	0.99245	0.99269	0.99281	0.99302	0.99500	0.99500	0.99500
51	0.99659	0.98348	0.97623	0.98090	0.98551	0.98951	0.99079	0.99089	0.99151	0.99163	0.99183	0.99209	0.99220	0.99246	0.99264	0.99277	0.99294	0.99319	0.99500	0.99500
52	0.99458	0.98231	0.97641	0.98080	0.98584	0.98973	0.99099	0.99102	0.99166	0.99174	0.99199	0.99222	0.99230	0.99256	0.99278	0.99294	0.99302	0.99328	0.99500	0.99500
53	0.99161	0.98144	0.97653	0.98104	0.98597	0.98986	0.99111	0.99121	0.99168	0.99181	0.99207	0.99227	0.99240	0.99263	0.99282	0.99299	0.99316	0.99334	0.99500	0.99500
54	0.98797	0.98088	0.97702	0.98095	0.98614	0.99005	0.99122	0.99139	0.99148	0.99194	0.99212	0.99229	0.99245	0.99268	0.99288	0.99304	0.99317	0.99342	0.99500	0.99500
55	0.98557	0.98045	0.97762	0.98099	0.98628	0.99020	0.99132	0.99148	0.99145	0.99206	0.99217	0.99235	0.99251	0.99274	0.99291	0.99311	0.99326	0.99342	0.99500	0.99500
56	0.98370	0.98029	0.97880	0.98102	0.98642	0.99031	0.99135	0.99163	0.99152	0.99205	0.99225	0.99244	0.99254	0.99281	0.99297	0.99318	0.99330	0.99347	0.99500	0.99500
57	0.98265	0.98044	0.97997	0.98111	0.98636	0.99041	0.99139	0.99166	0.99152	0.99211	0.99228	0.99244	0.99260	0.99281	0.99300	0.99321	0.99334	0.99348	0.99500	0.99500
58	0.98264	0.98087	0.98095	0.98114	0.98652	0.99033	0.99138	0.99166	0.99159	0.99204	0.99225	0.99246	0.99262	0.99280	0.99302	0.99322	0.99335	0.99349	0.99500	0.99500
59	0.98327	0.98152	0.98212	0.98150	0.98637	0.99028	0.99138	0.99164	0.99172	0.99184	0.99229	0.99244	0.99261	0.99280	0.99300	0.99320	0.99333	0.99350	0.99500	0.99500
60	0.98367	0.98203	0.98281	0.98180	0.98619	0.99011	0.99128	0.99162	0.99173	0.99175	0.99229	0.99244	0.99262	0.99279	0.99298	0.99318	0.99334	0.99351	0.99500	0.99500

**Nondisabled Retired Officer Mortality Improvement Rates (cont'd)**

Age	1990-94	1995-99	2000-04	2005-09	2010-14	2015-19	2020-24	2025-29	2030-34	2035-39	2040-44	2045-49	2050-54	2055-59	2060-64	2065-69	2070-74	2075-79	2080-84	2085-89
61	0.98439	0.98252	0.98353	0.98273	0.98602	0.98992	0.99121	0.99159	0.99178	0.99176	0.99230	0.99244	0.99265	0.99278	0.99301	0.99316	0.99335	0.99354	0.99500	0.99500
62	0.98534	0.98333	0.98460	0.98399	0.98609	0.98971	0.99127	0.99166	0.99188	0.99183	0.99235	0.99252	0.99270	0.99286	0.99306	0.99321	0.99339	0.99357	0.99500	0.99500
63	0.98582	0.98449	0.98581	0.98549	0.98639	0.98983	0.99129	0.99181	0.99207	0.99204	0.99242	0.99260	0.99283	0.99296	0.99313	0.99329	0.99347	0.99363	0.99500	0.99500
64	0.98738	0.98566	0.98674	0.98730	0.98700	0.98971	0.99140	0.99200	0.99226	0.99232	0.99240	0.99279	0.99293	0.99310	0.99322	0.99338	0.99354	0.99370	0.99501	0.99500
65	0.98839	0.98689	0.98825	0.98866	0.98761	0.98956	0.99136	0.99215	0.99240	0.99250	0.99247	0.99296	0.99303	0.99320	0.99332	0.99347	0.99361	0.99376	0.99501	0.99500
66	0.98834	0.98776	0.98913	0.98978	0.98855	0.98927	0.99123	0.99218	0.99249	0.99263	0.99258	0.99302	0.99312	0.99328	0.99338	0.99353	0.99367	0.99381	0.99501	0.99500
67	0.98824	0.98781	0.98955	0.99052	0.98936	0.98898	0.99090	0.99220	0.99256	0.99273	0.99263	0.99307	0.99318	0.99333	0.99344	0.99358	0.99371	0.99386	0.99501	0.99500
68	0.98741	0.98713	0.98977	0.99074	0.98991	0.98866	0.99077	0.99210	0.99256	0.99280	0.99272	0.99305	0.99320	0.99337	0.99349	0.99361	0.99375	0.99388	0.99501	0.99500
69	0.98694	0.98601	0.98974	0.99045	0.99057	0.99057	0.99036	0.99198	0.99261	0.99283	0.99285	0.99290	0.99327	0.99338	0.99353	0.99363	0.99377	0.99391	0.99501	0.99501
70	0.98713	0.98498	0.98964	0.99076	0.99087	0.98857	0.98993	0.99176	0.99258	0.99283	0.99290	0.99285	0.99334	0.99341	0.99355	0.99366	0.99379	0.99394	0.99501	0.99501
71	0.98782	0.98437	0.99006	0.99088	0.99126	0.98901	0.98941	0.99149	0.99249	0.99282	0.99294	0.99288	0.99334	0.99342	0.99358	0.99369	0.99382	0.99397	0.99501	0.99501
72	0.98764	0.98411	0.99029	0.99105	0.99167	0.98954	0.98896	0.99106	0.99244	0.99281	0.99299	0.99286	0.99336	0.99344	0.99360	0.99371	0.99385	0.99399	0.99501	0.99501
73	0.98721	0.98419	0.99119	0.99150	0.99199	0.99003	0.98853	0.99086	0.99229	0.99277	0.99301	0.99293	0.99329	0.99345	0.99361	0.99373	0.99386	0.99401	0.99501	0.99501
74	0.98713	0.98455	0.99182	0.99199	0.99202	0.99075	0.98842	0.99038	0.99215	0.99280	0.99304	0.99305	0.99312	0.99350	0.99362	0.99376	0.99388	0.99403	0.99501	0.99501
75	0.98710	0.98515	0.99200	0.99243	0.99265	0.99119	0.98843	0.98999	0.99197	0.99282	0.99309	0.99315	0.99310	0.99361	0.99367	0.99382	0.99393	0.99408	0.99501	0.99501
76	0.98791	0.98585	0.99196	0.99323	0.99295	0.99160	0.98896	0.98950	0.99175	0.99279	0.99314	0.99325	0.99318	0.99365	0.99374	0.99388	0.99400	0.99413	0.99501	0.99501
77	0.98894	0.98668	0.99259	0.99377	0.99316	0.99190	0.98943	0.98895	0.99124	0.99271	0.99310	0.99327	0.99313	0.99365	0.99373	0.99388	0.99401	0.99414	0.99501	0.99501
78	0.99012	0.98766	0.99252	0.99486	0.99352	0.99192	0.98972	0.98827	0.99087	0.99241	0.99297	0.99320	0.99311	0.99350	0.99367	0.99383	0.99398	0.99410	0.99501	0.99501
79	0.99167	0.98874	0.99290	0.99560	0.99382	0.99157	0.99027	0.98789	0.99014	0.99213	0.99287	0.99312	0.99314	0.99321	0.99364	0.99377	0.99393	0.99405	0.99501	0.99501
80	0.99237	0.98990	0.99409	0.99585	0.99400	0.99182	0.99042	0.98757	0.98941	0.99168	0.99269	0.99299	0.99307	0.99301	0.99361	0.99369	0.99387	0.99399	0.99501	0.99501
81	0.99340	0.99112	0.99507	0.99581	0.99460	0.99181	0.99071	0.98802	0.98869	0.99131	0.99252	0.99295	0.99309	0.99301	0.99357	0.99368	0.99386	0.99400	0.99501	0.99501
82	0.99476	0.99240	0.99548	0.99642	0.99496	0.99198	0.99128	0.98886	0.98836	0.99098	0.99266	0.99311	0.99330	0.99313	0.99372	0.99382	0.99399	0.99413	0.99502	0.99501
83	0.99605	0.99372	0.99634	0.99622	0.99598	0.99259	0.99193	0.98991	0.98833	0.99120	0.99288	0.99345	0.99369	0.99354	0.99394	0.99409	0.99425	0.99438	0.99502	0.99501
84	0.99858	0.99503	0.99707	0.99649	0.99665	0.99323	0.99226	0.99134	0.98878	0.99116	0.99320	0.99391	0.99412	0.99406	0.99407	0.99447	0.99454	0.99466	0.99502	0.99501
85	0.99958	0.99633	0.99765	0.99758	0.99675	0.99369	0.99320	0.99224	0.98923	0.99108	0.99334	0.99425	0.99446	0.99444	0.99428	0.99480	0.99490	0.99502	0.99502	0.99501
86	1.00165	0.99759	0.99848	0.99845	0.99649	0.99440	0.99356	0.99297	0.99016	0.99079	0.99331	0.99439	0.99469	0.99470	0.99451	0.99497	0.99498	0.99506	0.99503	0.99501
87	1.00171	0.99881	0.99957	0.99876	0.99688	0.99463	0.99369	0.99352	0.99104	0.99049	0.99299	0.99449	0.99480	0.99487	0.99461	0.99507	0.99507	0.99515	0.99504	0.99502
88	1.00303	0.99999	0.99993	0.99955	0.99642	0.99533	0.99390	0.99375	0.99173	0.99016	0.99287	0.99437	0.99482	0.99494	0.99473	0.99502	0.99510	0.99518	0.99506	0.99502
89	1.00381	1.00111	1.00035	1.00023	0.99644	0.99553	0.99396	0.99348	0.99259	0.99015	0.99238	0.99423	0.99482	0.99495	0.99486	0.99514	0.99518	0.99508	0.99508	0.99501
90	1.00442	1.00217	1.00035	1.00073	0.99725	0.99517	0.99384	0.99382	0.99294	0.99014	0.99191	0.99394	0.99474	0.99490	0.99487	0.99471	0.99517	0.99515	0.99509	0.99502
91	1.00491	1.00318	0.99963	1.00168	0.99801	0.99441	0.99445	0.99373	0.99324	0.99070	0.99136	0.99363	0.99457	0.99483	0.99486	0.99469	0.99510	0.99511	0.99509	0.99503
92	1.00532	1.00413	1.00006	1.00195	0.99817	0.99443	0.99439	0.99361	0.99353	0.99132	0.99096	0.99319	0.99449	0.99477	0.99485	0.99465	0.99507	0.99508	0.99509	0.99504
93	1.00570	1.00502	1.00046	1.00219	0.99832	0.99447	0.99390	0.99401	0.99366	0.99191	0.99067	0.99306	0.99432	0.99472	0.99486	0.99470	0.99498	0.99506	0.99510	0.99505
94	1.00607	1.00585	1.00083	1.00241	0.99847	0.99456	0.99392	0.99402	0.99370	0.99247	0.99076	0.99273	0.99423	0.99474	0.99487	0.99482	0.99482	0.99510	0.99510	0.99506
95	1.00637	1.00652	1.00113	1.00258	0.99860	0.99463	0.99394	0.99402	0.99374	0.99312	0.99084	0.99243	0.99406	0.99471	0.99486	0.99476	0.99476	0.99514	0.99510	0.99507
96	1.00660	1.00703	1.00135	1.00269	0.99869	0.99468	0.99395	0.99402	0.99378	0.99353	0.99214	0.99147	0.99358	0.99463	0.99485	0.99489	0.99479	0.99512	0.99511	0.99507
97	1.00677	1.00737	1.00151	1.00275	0.99875	0.99472	0.99396	0.99402	0.99380	0.99359	0.99231	0.99170	0.99330	0.99460	0.99483	0.99492	0.99478	0.99512	0.99511	0.99507
98	1.00687	1.00754	1.00159	1.00277	0.99877	0.99474	0.99396	0.99402	0.99382	0.99363	0.99245	0.99189	0.99312	0.99449	0.99481	0.99494	0.99484	0.99507	0.99511	0.99508
99	1.00690	1.00754	1.00159	1.00272	0.99877	0.99475	0.99396	0.99402	0.99384	0.99366	0.99256	0.99204	0.99273	0.99456	0.99483	0.99496	0.99493	0.99494	0.99515	0.99508
100	1.00693	1.00754	1.00160	1.00268	0.99876	0.99476	0.99396	0.99401	0.99385	0.99370	0.99267	0.99219	0.99284	0.99420	0.99480	0.99495	0.99496	0.99489	0.99518	0.99508
101	1.00696	1.00754	1.00161	1.00264	0.99875	0.99477	0.99396	0.99401	0.99387	0.99373	0.99278	0.99235	0.99295	0.99393	0.99473	0.99493	0.99498	0.99491	0.99517	0.99509
102	1.00699	1.00754	1.00162	1.00260	0.99874	0.99478	0.99396	0.99400	0.99388	0.99376	0.99289	0.99250	0.99306	0.99366	0.99470	0.99492	0.99500	0.99490	0.99517	0.99509
103	1.00703	1.00754	1.00162	1.00255	0.99874	0.99479	0.99396	0.99400	0.99390	0.99380	0.99301	0.99265	0.99317	0.99350	0.99461	0.99489	0.99501	0.99495	0.99513	0.99509
104	1.00706	1.00754	1.00163	1.00251	0.99873	0.99480	0.99396	0.99399	0.99391	0.99383	0.99312	0.99281	0.99329	0.99334	0.99455	0.99490	0.99502	0.99502	0.99502	0.99511
105	1.00709	1.00754	1.00164	1.00246	0.99872	0.99481	0.99396	0.99399	0.99393	0.99387	0.99324	0.99296	0.99340	0.99331	0.99443	0.99487	0.99500	0.99504	0.99499	0.99514
106	1.00712	1.00754	1.00164	1.00242	0.99871	0.99482	0.99396	0.99399	0.99395	0.99390	0.99335	0.99312	0.99351	0.99337	0.99432	0.99481	0.99498	0.99504	0.99500	0.99512
107	1.00716	1.00754	1.00165	1.00238	0.99871	0.99483	0.99396	0.99398	0.99396	0.99394	0.99347	0.99328	0.99363	0.99349	0.99416	0.99477	0.99496	0.99505	0.99500	0.99511
108	1.00719	1.00754	1.00166	1.00233	0.99870	0.99484	0.99396	0.99398	0.99398	0.99397	0.99359	0.99344	0.99374	0.99358	0.99415	0.9				

# Nondisabled Retired Enlisted Mortality Improvement Rates

Age	1990-94	1995-99	2000-04	2005-09	2010-14	2015-19	2020-24	2025-29	2030-34	2035-39	2040-44	2045-49	2050-54	2055-59	2060-64	2065-69	2070-74	2075-79	2080-84	2085-89
16	0.97651	0.99417	0.99046	0.98896	0.99122	0.99187	0.99203	0.99205	0.99202	0.99231	0.99204	0.99204	0.99204	0.99245	0.99179	0.99262	0.99229	0.99202	0.99500	0.99500
17	0.97638	0.99432	0.99049	0.98901	0.99105	0.99214	0.99208	0.99199	0.99219	0.99243	0.99210	0.99238	0.99241	0.99214	0.99214	0.99242	0.99249	0.99220	0.99500	0.99500
18	0.97733	0.99436	0.98989	0.98839	0.99104	0.99222	0.99190	0.99203	0.99218	0.99259	0.99253	0.99231	0.99193	0.99253	0.99251	0.99253	0.99251	0.99226	0.99500	0.99500
19	0.97936	0.99421	0.98902	0.98744	0.98904	0.99105	0.99202	0.99188	0.99214	0.99212	0.99226	0.99216	0.99236	0.99238	0.99205	0.99259	0.99226	0.99233	0.99500	0.99500
20	0.98164	0.99407	0.98804	0.98655	0.98827	0.99085	0.99197	0.99200	0.99184	0.99224	0.99212	0.99225	0.99218	0.99242	0.99209	0.99236	0.99230	0.99261	0.99500	0.99500
21	0.98350	0.99401	0.98717	0.98589	0.98775	0.99088	0.99174	0.99196	0.99199	0.99211	0.99203	0.99212	0.99228	0.99223	0.99239	0.99218	0.99233	0.99262	0.99500	0.99500
22	0.98404	0.99369	0.98671	0.98545	0.98752	0.99072	0.99156	0.99212	0.99196	0.99228	0.99179	0.99206	0.99243	0.99216	0.99230	0.99233	0.99222	0.99249	0.99500	0.99500
23	0.98263	0.99310	0.98653	0.98558	0.98736	0.99069	0.99173	0.99192	0.99196	0.99227	0.99175	0.99226	0.99220	0.99215	0.99229	0.99229	0.99247	0.99249	0.99500	0.99500
24	0.98026	0.99234	0.98689	0.98596	0.98748	0.99090	0.99141	0.99216	0.99182	0.99213	0.99205	0.99232	0.99225	0.99225	0.99218	0.99215	0.99236	0.99265	0.99500	0.99500
25	0.97719	0.99148	0.98696	0.98635	0.98782	0.99065	0.99153	0.99194	0.99200	0.99211	0.99203	0.99215	0.99209	0.99228	0.99220	0.99247	0.99241	0.99243	0.99500	0.99500
26	0.97519	0.99077	0.98710	0.98667	0.98790	0.99078	0.99152	0.99195	0.99204	0.99192	0.99205	0.99221	0.99214	0.99234	0.99207	0.99251	0.99229	0.99252	0.99500	0.99500
27	0.97596	0.99072	0.98735	0.98725	0.98818	0.99078	0.99152	0.99192	0.99201	0.99189	0.99202	0.99241	0.99190	0.99233	0.99203	0.99250	0.99252	0.99252	0.99500	0.99500
28	0.98007	0.99161	0.98757	0.98797	0.98880	0.99102	0.99157	0.99176	0.99202	0.99192	0.99223	0.99216	0.99190	0.99249	0.99201	0.99269	0.99248	0.99243	0.99500	0.99500
29	0.98596	0.99306	0.98805	0.98856	0.98943	0.99126	0.99161	0.99178	0.99182	0.99209	0.99218	0.99212	0.99226	0.99218	0.99234	0.99256	0.99257	0.99254	0.99500	0.99500
30	0.99243	0.99451	0.98831	0.98922	0.99011	0.99123	0.99170	0.99188	0.99188	0.99195	0.99222	0.99213	0.99225	0.99237	0.99232	0.99251	0.99268	0.99246	0.99500	0.99500
31	0.99762	0.99582	0.98843	0.98980	0.99055	0.99135	0.99177	0.99178	0.99198	0.99198	0.99240	0.99191	0.99244	0.99211	0.99268	0.99242	0.99282	0.99258	0.99500	0.99500
32	1.00074	0.99703	0.98829	0.98993	0.99063	0.99143	0.99170	0.99164	0.99194	0.99199	0.99222	0.99207	0.99236	0.99227	0.99258	0.99253	0.99246	0.99288	0.99500	0.99500
33	1.00113	0.99818	0.98950	0.99054	0.99117	0.99169	0.99164	0.99176	0.99193	0.99229	0.99198	0.99224	0.99231	0.99262	0.99256	0.99249	0.99269	0.99269	0.99500	0.99500
34	0.99996	0.99919	0.98708	0.98886	0.98994	0.99118	0.99136	0.99173	0.99171	0.99186	0.99201	0.99204	0.99229	0.99234	0.99245	0.99257	0.99270	0.99269	0.99500	0.99500
35	0.99791	1.00004	0.98640	0.98798	0.98939	0.99094	0.99124	0.99156	0.99168	0.99180	0.99192	0.99212	0.99216	0.99240	0.99230	0.99260	0.99251	0.99289	0.99500	0.99500
36	0.99665	1.00054	0.98552	0.98716	0.98897	0.99068	0.99119	0.99135	0.99171	0.99166	0.99193	0.99195	0.99210	0.99231	0.99240	0.99268	0.99240	0.99275	0.99500	0.99500
37	1.00095	1.00065	0.98487	0.98653	0.98840	0.99042	0.99111	0.99137	0.99156	0.99162	0.99185	0.99200	0.99200	0.99234	0.99239	0.99249	0.99256	0.99270	0.99500	0.99500
38	1.00578	1.00045	0.98431	0.98593	0.98800	0.99030	0.99105	0.99125	0.99140	0.99157	0.99175	0.99201	0.99198	0.99228	0.99233	0.99256	0.99245	0.99291	0.99500	0.99500
39	1.01002	0.99993	0.98326	0.98535	0.98778	0.99008	0.99096	0.99123	0.99134	0.99158	0.99164	0.99194	0.99193	0.99232	0.99233	0.99255	0.99258	0.99267	0.99500	0.99500
40	1.01644	0.99915	0.98216	0.98489	0.98751	0.99005	0.99089	0.99109	0.99137	0.99157	0.99171	0.99188	0.99195	0.99229	0.99229	0.99261	0.99261	0.99270	0.99500	0.99500
41	1.01904	0.99821	0.98094	0.98455	0.98725	0.98989	0.99094	0.99101	0.99133	0.99148	0.99171	0.99182	0.99201	0.99229	0.99227	0.99257	0.99267	0.99273	0.99500	0.99500
42	1.01949	0.99714	0.97917	0.98400	0.98685	0.98967	0.99070	0.99089	0.99126	0.99138	0.99166	0.99175	0.99201	0.99215	0.99234	0.99233	0.99269	0.99272	0.99500	0.99500
43	1.01702	0.99598	0.97838	0.98329	0.98623	0.98935	0.99052	0.99066	0.99105	0.99123	0.99147	0.99161	0.99185	0.99205	0.99221	0.99232	0.99263	0.99251	0.99500	0.99500
44	1.01329	0.99477	0.97719	0.98258	0.98556	0.98890	0.99026	0.99053	0.99077	0.99099	0.99127	0.99138	0.99177	0.99184	0.99208	0.99226	0.99244	0.99254	0.99500	0.99500
45	1.00886	0.99360	0.97706	0.98160	0.98492	0.98852	0.99001	0.99025	0.99057	0.99083	0.99098	0.99131	0.99156	0.99171	0.99190	0.99215	0.99240	0.99239	0.99500	0.99500
46	1.00532	0.99237	0.97662	0.98060	0.98455	0.98831	0.98976	0.99018	0.99036	0.99072	0.99090	0.99119	0.99146	0.99160	0.99184	0.99216	0.99227	0.99247	0.99500	0.99500
47	1.00226	0.99074	0.97660	0.97946	0.98442	0.98831	0.98971	0.99016	0.99043	0.99074	0.99088	0.99119	0.99144	0.99171	0.99192	0.99210	0.99230	0.99254	0.99500	0.99500
48	1.00023	0.98878	0.97635	0.97940	0.98450	0.98847	0.98988	0.99038	0.99062	0.99083	0.99114	0.99135	0.99163	0.99178	0.99205	0.99228	0.99246	0.99267	0.99500	0.99500
49	0.99887	0.98670	0.97642	0.97923	0.98491	0.98874	0.99018	0.99063	0.99084	0.99114	0.99135	0.99160	0.99184	0.99204	0.99227	0.99240	0.99263	0.99289	0.99500	0.99500
50	0.99803	0.98487	0.97630	0.97994	0.98513	0.98900	0.99044	0.99089	0.99120	0.99134	0.99163	0.99186	0.99199	0.99230	0.99243	0.99267	0.99279	0.99301	0.99500	0.99500
51	0.99677	0.98343	0.97651	0.98027	0.98509	0.98930	0.99066	0.99113	0.99138	0.99158	0.99178	0.99208	0.99219	0.99245	0.99262	0.99275	0.99292	0.99317	0.99500	0.99500
52	0.99480	0.98225	0.97696	0.98068	0.98480	0.98957	0.99082	0.99126	0.99153	0.99169	0.99194	0.99220	0.99229	0.99256	0.99276	0.99292	0.99300	0.99327	0.99500	0.99500
53	0.99180	0.98135	0.97754	0.98062	0.98494	0.98978	0.99093	0.99134	0.99165	0.99177	0.99203	0.99224	0.99240	0.99263	0.99280	0.99297	0.99314	0.99333	0.99500	0.99500
54	0.98859	0.98074	0.97828	0.98070	0.98487	0.99000	0.99102	0.99136	0.99165	0.99185	0.99207	0.99225	0.99245	0.99268	0.99287	0.99302	0.99315	0.99341	0.99500	0.99500
55	0.98564	0.98033	0.97915	0.98061	0.98545	0.99004	0.99113	0.99142	0.99167	0.99192	0.99213	0.99230	0.99251	0.99274	0.99289	0.99309	0.99324	0.99341	0.99500	0.99500
56	0.98368	0.98015	0.98034	0.98082	0.98574	0.98996	0.99120	0.99154	0.99170	0.99195	0.99221	0.99241	0.99253	0.99280	0.99296	0.99316	0.99328	0.99346	0.99500	0.99500
57	0.98263	0.98031	0.98136	0.98124	0.98608	0.98953	0.99128	0.99155	0.99171	0.99201	0.99224	0.99240	0.99259	0.99280	0.99298	0.99320	0.99332	0.99346	0.99500	0.99500
58	0.98260	0.98074	0.98199	0.98174	0.98602	0.98944	0.99132	0.99152	0.99171	0.99201	0.99221	0.99242	0.99259	0.99280	0.99298	0.99321	0.99334	0.99348	0.99500	0.99500
59	0.98313	0.98139	0.98260	0.98243	0.98603	0.98917	0.99136	0.99149	0.99172	0.99198	0.99222	0.99240	0.99259	0.99280	0.99300	0.99319	0.99331	0.99349	0.99500	0.99500
60	0.98379	0.98191	0.98311	0.98305	0.98574	0.98938	0.99116	0.99147	0.99169	0.99196	0.99217	0.99240	0.99259	0.99280	0.99298	0.99318	0.99333	0.99350	0.99500	0.99500

**Nondisabled Retired Enlisted Mortality Improvement Rates (cont'd)**

Age	1990-94	1995-99	2000-04	2005-09	2010-14	2015-19	2020-24	2025-29	2030-34	2035-39	2040-44	2045-49	2050-54	2055-59	2060-64	2065-69	2070-74	2075-79	2080-84	2085-89
61	0.98428	0.98241	0.98377	0.98404	0.98573	0.98931	0.99090	0.99148	0.99172	0.99192	0.99221	0.99241	0.99262	0.99278	0.99301	0.99316	0.99335	0.99354	0.99500	0.99500
62	0.98492	0.98324	0.98469	0.98525	0.98612	0.98948	0.99046	0.99157	0.99179	0.99202	0.99226	0.99249	0.99267	0.99286	0.99306	0.99321	0.99339	0.99356	0.99501	0.99500
63	0.98574	0.98439	0.98604	0.98645	0.98689	0.98940	0.99045	0.99177	0.99195	0.99215	0.99240	0.99257	0.99280	0.99294	0.99314	0.99329	0.99346	0.99362	0.99501	0.99500
64	0.98664	0.98555	0.98721	0.98772	0.98878	0.98943	0.99033	0.99199	0.99211	0.99235	0.99253	0.99272	0.99290	0.99307	0.99322	0.99339	0.99354	0.99369	0.99501	0.99500
65	0.98734	0.98679	0.98844	0.98893	0.98880	0.98918	0.99064	0.99203	0.99226	0.99247	0.99266	0.99284	0.99299	0.99317	0.99332	0.99347	0.99360	0.99375	0.99501	0.99500
66	0.98791	0.98764	0.98929	0.98999	0.98982	0.98906	0.99062	0.99187	0.99237	0.99257	0.99275	0.99293	0.99308	0.99325	0.99337	0.99353	0.99367	0.99380	0.99501	0.99500
67	0.98832	0.98770	0.98981	0.99059	0.99059	0.98909	0.99069	0.99138	0.99246	0.99263	0.99281	0.99298	0.99315	0.99330	0.99343	0.99357	0.99371	0.99385	0.99501	0.99500
68	0.98826	0.98694	0.98986	0.99096	0.99086	0.98924	0.99035	0.99124	0.99252	0.99268	0.99284	0.99303	0.99316	0.99334	0.99347	0.99361	0.99374	0.99387	0.99501	0.99501
69	0.98801	0.98580	0.98984	0.99089	0.99102	0.98953	0.99009	0.99088	0.99260	0.99268	0.99285	0.99304	0.99320	0.99335	0.99350	0.99363	0.99377	0.99390	0.99501	0.99501
70	0.98769	0.98483	0.98970	0.99094	0.99117	0.98981	0.98955	0.99102	0.99246	0.99269	0.99287	0.99305	0.99322	0.99338	0.99352	0.99366	0.99379	0.99394	0.99501	0.99501
71	0.98785	0.98427	0.98985	0.99104	0.99150	0.99034	0.98920	0.99086	0.99217	0.99271	0.99288	0.99305	0.99325	0.99339	0.99355	0.99369	0.99382	0.99396	0.99501	0.99501
72	0.98754	0.98402	0.99016	0.99130	0.99178	0.99084	0.98907	0.99083	0.99158	0.99271	0.99289	0.99306	0.99327	0.99341	0.99357	0.99371	0.99385	0.99399	0.99501	0.99501
73	0.98717	0.98411	0.99054	0.99159	0.99225	0.99105	0.98913	0.99041	0.99139	0.99274	0.99289	0.99307	0.99327	0.99342	0.99359	0.99372	0.99387	0.99402	0.99501	0.99501
74	0.98682	0.98449	0.99096	0.99210	0.99250	0.99127	0.98940	0.99097	0.99279	0.99279	0.99289	0.99306	0.99327	0.99343	0.99359	0.99374	0.99389	0.99404	0.99501	0.99501
75	0.98690	0.98505	0.99160	0.99250	0.99287	0.99154	0.98974	0.99056	0.99118	0.99271	0.99295	0.99312	0.99332	0.99349	0.99365	0.99380	0.99394	0.99409	0.99502	0.99501
76	0.98718	0.98577	0.99230	0.99305	0.99315	0.99188	0.99036	0.98924	0.99107	0.99245	0.99302	0.99319	0.99337	0.99356	0.99371	0.99385	0.99401	0.99414	0.99502	0.99501
77	0.98781	0.98663	0.99278	0.99367	0.99345	0.99204	0.99081	0.98903	0.99099	0.99178	0.99301	0.99317	0.99335	0.99356	0.99371	0.99386	0.99401	0.99415	0.99502	0.99501
78	0.98883	0.98761	0.99345	0.99424	0.99365	0.99224	0.99083	0.98889	0.99036	0.99141	0.99294	0.99307	0.99327	0.99348	0.99364	0.99380	0.99397	0.99412	0.99502	0.99502
79	0.99000	0.98867	0.99406	0.99476	0.99399	0.99214	0.99085	0.98935	0.98978	0.99079	0.99288	0.99296	0.99317	0.99340	0.99357	0.99374	0.99392	0.99408	0.99503	0.99502
80	0.99145	0.98982	0.99477	0.99547	0.99412	0.99211	0.99082	0.98903	0.98887	0.99076	0.99257	0.99284	0.99305	0.99329	0.99348	0.99366	0.99385	0.99401	0.99503	0.99502
81	0.99222	0.99106	0.99516	0.99621	0.99444	0.99207	0.99104	0.98962	0.98834	0.99051	0.99214	0.99283	0.99303	0.99325	0.99348	0.99366	0.99384	0.99402	0.99504	0.99502
82	0.99432	0.99236	0.99578	0.99665	0.99488	0.99233	0.99144	0.99043	0.98837	0.99067	0.99158	0.99302	0.99320	0.99340	0.99363	0.99380	0.99397	0.99414	0.99504	0.99502
83	0.99634	0.99368	0.99670	0.99723	0.99534	0.99275	0.99228	0.99114	0.98893	0.99058	0.99174	0.99343	0.99355	0.99372	0.99393	0.99408	0.99423	0.99438	0.99504	0.99503
84	0.99846	0.99502	0.99717	0.99774	0.99577	0.99342	0.99288	0.99194	0.98983	0.99070	0.99174	0.99394	0.99396	0.99410	0.99428	0.99440	0.99453	0.99465	0.99505	0.99503
85	1.00043	0.99634	0.99747	0.99832	0.99636	0.99382	0.99349	0.99263	0.99067	0.99043	0.99235	0.99413	0.99431	0.99442	0.99457	0.99468	0.99478	0.99488	0.99505	0.99503
86	1.00210	0.99762	0.99796	0.99856	0.99693	0.99423	0.99382	0.99328	0.99172	0.99030	0.99246	0.99401	0.99457	0.99465	0.99476	0.99488	0.99496	0.99504	0.99505	0.99503
87	1.00341	0.99886	0.99803	0.99943	0.99713	0.99455	0.99405	0.99367	0.99256	0.99037	0.99262	0.99342	0.99472	0.99478	0.99487	0.99499	0.99505	0.99513	0.99506	0.99504
88	1.00439	1.00005	0.99851	0.99972	0.99727	0.99480	0.99412	0.99409	0.99288	0.99060	0.99221	0.99326	0.99480	0.99482	0.99490	0.99502	0.99509	0.99516	0.99506	0.99504
89	1.00512	1.00117	0.99898	0.99988	0.99773	0.99482	0.99410	0.99317	0.99103	0.99188	0.99284	0.99485	0.99481	0.99489	0.99501	0.99508	0.99516	0.99507	0.99507	0.99504
90	1.00566	1.00224	0.99944	1.00028	0.99791	0.99481	0.99403	0.99403	0.99382	0.99095	0.99122	0.99302	0.99463	0.99476	0.99486	0.99497	0.99505	0.99513	0.99507	0.99504
91	1.00608	1.00325	0.99987	1.00065	0.99807	0.99479	0.99396	0.99378	0.99185	0.99082	0.99285	0.99423	0.99473	0.99481	0.99491	0.99503	0.99510	0.99508	0.99505	0.99505
92	1.00643	1.00420	1.00027	1.00100	0.99821	0.99478	0.99391	0.99391	0.99375	0.99261	0.99075	0.99284	0.99356	0.99470	0.99478	0.99487	0.99500	0.99507	0.99508	0.99505
93	1.00674	1.00510	1.00065	1.00132	0.99836	0.99480	0.99389	0.99388	0.99375	0.99306	0.99095	0.99246	0.99340	0.99471	0.99476	0.99485	0.99498	0.99505	0.99508	0.99505
94	1.00705	1.00594	1.00100	1.00161	0.99851	0.99485	0.99391	0.99390	0.99378	0.99376	0.99103	0.99226	0.99310	0.99476	0.99476	0.99485	0.99497	0.99505	0.99509	0.99506
95	1.00729	1.00661	1.00128	1.00185	0.99863	0.99490	0.99393	0.99392	0.99382	0.99380	0.99163	0.99182	0.99332	0.99463	0.99476	0.99486	0.99497	0.99506	0.99509	0.99506
96	1.00747	1.00712	1.00149	1.00203	0.99872	0.99493	0.99394	0.99393	0.99384	0.99384	0.99244	0.99156	0.99324	0.99436	0.99477	0.99486	0.99496	0.99507	0.99509	0.99506
97	1.00759	1.00746	1.00163	1.00215	0.99878	0.99495	0.99395	0.99394	0.99387	0.99387	0.99357	0.99105	0.99327	0.99388	0.99478	0.99486	0.99495	0.99507	0.99510	0.99506
98	1.00764	1.00763	1.00170	1.00220	0.99880	0.99495	0.99396	0.99394	0.99388	0.99389	0.99362	0.99150	0.99296	0.99376	0.99480	0.99486	0.99495	0.99506	0.99510	0.99507
99	1.00764	1.00763	1.00170	1.00220	0.99879	0.99495	0.99396	0.99394	0.99389	0.99391	0.99366	0.99196	0.99273	0.99349	0.99484	0.99486	0.99495	0.99506	0.99510	0.99507
100	1.00763	1.00763	1.00170	1.00220	0.99879	0.99495	0.99396	0.99394	0.99391	0.99393	0.99370	0.99237	0.99229	0.99364	0.99473	0.99486	0.99495	0.99506	0.99511	0.99507
101	1.00762	1.00763	1.00170	1.00219	0.99878	0.99494	0.99396	0.99395	0.99392	0.99394	0.99374	0.99361	0.99190	0.99305	0.99451	0.99487	0.99495	0.99505	0.99512	0.99508
102	1.00761	1.00763	1.00170	1.00219	0.99877	0.99494	0.99396	0.99395	0.99393	0.99396	0.99378	0.99370	0.99210	0.99329	0.99410	0.99487	0.99495	0.99504	0.99512	0.99508
103	1.00761	1.00763	1.00170	1.00219	0.99876	0.99493	0.99396	0.99395	0.99394	0.99398	0.99382	0.99373	0.99229	0.99323	0.99401	0.99489	0.99495	0.99504	0.99512	0.99508
104	1.00760	1.00763	1.00170	1.00218	0.99875	0.99493	0.99396	0.99395	0.99395	0.99400	0.99386	0.99379	0.99248	0.99331	0.99381	0.99491	0.99494	0.99504	0.99511	0.99508
105	1.00759	1.00763	1.00170	1.00218	0.99874	0.99493	0.99396	0.99395	0.99397	0.99402	0.99390	0.99385	0.99268	0.99320	0.99396	0.99482	0.99494	0.99503	0.99511	0.99508
106	1.00759	1.00763	1.00170	1.00217	0.99873	0.99492	0.99396	0.99395	0.99398	0.99403	0.99395	0.99391	0.99287	0.99339	0.99392	0.99465	0.99494	0.99502	0.99510	0.99509
107	1.00758	1.00763	1.00170	1.00217	0.99872	0.99492	0.99397	0.99395	0.99399	0.99405	0.99399	0.99397	0.99307	0.99366	0.99395	0.99437	0.99493	0.99501	0.99509	0.99508
108	1.00757	1.00763	1.00170	1.00217	0.99871	0.99491	0.99397	0.99396	0.99400	0.99407	0.99397	0.99397	0.99327	0.99390	0.99383	0.				

Survivor Mortality Improvement Rates

Age	1990-94	1995-99	2000-04	2005-09	2010-14	2015-19	2020-24	2025-29	2030-34	2035-39	2040-44	2045-49	2050-54	2055-59	2060-64	2065-69	2070-74	2075-79	2080-84	2085-89
16	0.98701	0.99702	0.99258	0.99320	0.99442	0.99396	0.99433	0.99351	0.99424	0.99381	0.99330	0.99315	0.99250	0.99272	0.99228	0.99294	0.99195	0.99240	0.99500	0.99500
17	0.98560	0.99660	0.99269	0.99276	0.99417	0.99494	0.99428	0.99463	0.99420	0.99432	0.99439	0.99305	0.99288	0.99283	0.99305	0.99228	0.99277	0.99249	0.99500	0.99500
18	0.98492	0.99595	0.99334	0.99208	0.99422	0.99490	0.99476	0.99467	0.99476	0.99486	0.99443	0.99358	0.99333	0.99365	0.99198	0.99306	0.99274	0.99269	0.99500	0.99500
19	0.98428	0.99492	0.99117	0.99075	0.99321	0.99456	0.99531	0.99535	0.99460	0.99564	0.99517	0.99387	0.99345	0.99366	0.99245	0.99289	0.99211	0.99323	0.99500	0.99500
20	0.98333	0.99374	0.98870	0.98980	0.99173	0.99396	0.99593	0.99551	0.99479	0.99644	0.99637	0.99465	0.99351	0.99363	0.99218	0.99321	0.99245	0.99305	0.99500	0.99500
21	0.98311	0.99279	0.98719	0.98807	0.99058	0.99427	0.99536	0.99624	0.99564	0.99620	0.99619	0.99492	0.99439	0.99367	0.99220	0.99362	0.99231	0.99291	0.99500	0.99500
22	0.98304	0.99225	0.98521	0.98721	0.99021	0.99348	0.99540	0.99629	0.99590	0.99650	0.99642	0.99518	0.99471	0.99388	0.99223	0.99362	0.99223	0.99282	0.99500	0.99500
23	0.98307	0.99213	0.98906	0.99249	0.99013	0.99316	0.99557	0.99582	0.99615	0.99583	0.99541	0.99493	0.99410	0.99310	0.99256	0.99313	0.99242	0.99292	0.99500	0.99500
24	0.98443	0.99264	0.96922	0.97475	0.99063	0.99356	0.99554	0.99596	0.99558	0.99575	0.99638	0.99429	0.99472	0.99390	0.99275	0.99290	0.99264	0.99317	0.99500	0.99500
25	0.98539	0.99291	0.96024	0.97650	0.99093	0.99298	0.99486	0.99536	0.99564	0.99525	0.99496	0.99425	0.99427	0.99412	0.99261	0.99334	0.99248	0.99270	0.99500	0.99500
26	0.98668	0.99339	0.95954	0.98018	0.99167	0.99264	0.99467	0.99487	0.99543	0.99482	0.99451	0.99436	0.99398	0.99372	0.99352	0.99247	0.99325	0.99249	0.99500	0.99500
27	0.98853	0.99436	0.99263	0.97923	0.99122	0.99304	0.99449	0.99473	0.99489	0.99455	0.99411	0.99412	0.99409	0.99404	0.99333	0.99279	0.99303	0.99285	0.99500	0.99500
28	0.99140	0.99600	0.99123	0.99445	0.97881	0.99297	0.99450	0.99434	0.99473	0.99490	0.99399	0.99389	0.99433	0.99348	0.99357	0.99274	0.99328	0.99256	0.99500	0.99500
29	0.99427	0.99787	1.00889	0.97818	0.97876	0.99324	0.99444	0.99427	0.99453	0.99491	0.99403	0.99414	0.99423	0.99375	0.99320	0.99297	0.99314	0.99288	0.99500	0.99500
30	0.99705	0.99969	0.99076	0.97434	0.97963	0.99308	0.99391	0.99452	0.99426	0.99463	0.99453	0.99409	0.99406	0.99375	0.99357	0.99335	0.99262	0.99317	0.99500	0.99500
31	0.99984	1.00125	1.00005	0.97057	0.98133	0.99374	0.99349	0.99440	0.99442	0.99464	0.99467	0.99369	0.99446	0.99352	0.99359	0.99342	0.99297	0.99306	0.99500	0.99500
32	1.00222	1.00227	0.99130	0.99018	0.98006	0.99377	0.99404	0.99392	0.99417	0.99463	0.99493	0.99367	0.99404	0.99388	0.99361	0.99333	0.99292	0.99316	0.99500	0.99500
33	1.00477	1.00308	0.97216	0.98874	0.99398	0.98163	0.99377	0.99396	0.99413	0.99464	0.99455	0.99378	0.99395	0.99356	0.99353	0.99338	0.99286	0.99343	0.99500	0.99500
34	1.00675	1.00346	0.98479	1.00102	0.98266	0.98167	0.99346	0.99364	0.99411	0.99453	0.99415	0.99385	0.99399	0.99355	0.99355	0.99341	0.99291	0.99342	0.99500	0.99500
35	1.01479	1.00362	0.98561	0.98767	0.98027	0.98236	0.99329	0.99328	0.99398	0.99417	0.99381	0.99386	0.99363	0.99357	0.99350	0.99350	0.99298	0.99347	0.99500	0.99500
36	1.02828	1.00330	0.98553	0.99396	0.97672	0.98451	0.99305	0.99323	0.99376	0.99367	0.99379	0.99380	0.99329	0.99330	0.99357	0.99355	0.99311	0.99346	0.99500	0.99500
37	1.01959	1.00269	0.98275	0.98594	0.98785	0.98459	0.99370	0.99293	0.99340	0.99348	0.99334	0.99356	0.99332	0.99329	0.99331	0.99359	0.99321	0.99355	0.99500	0.99500
38	1.01934	1.00157	0.98671	0.97898	0.98718	0.99216	0.98741	0.99280	0.99324	0.99343	0.99314	0.99356	0.99312	0.99311	0.99337	0.99362	0.99327	0.99367	0.99500	0.99500
39	1.02317	1.00010	0.97736	0.98215	0.99141	0.98818	0.98777	0.99282	0.99311	0.99306	0.99341	0.99318	0.99343	0.99320	0.99320	0.99371	0.99339	0.99365	0.99500	0.99500
40	1.02348	0.99868	0.98166	0.98230	0.98671	0.98774	0.98844	0.99285	0.99302	0.99299	0.99318	0.99327	0.99338	0.99311	0.99331	0.99382	0.99328	0.99378	0.99500	0.99500
41	1.01932	0.99727	0.98150	0.98218	0.98910	0.98613	0.98894	0.99323	0.99285	0.99287	0.99333	0.99307	0.99361	0.99307	0.99326	0.99398	0.99324	0.99371	0.99500	0.99500
42	1.02042	0.99576	0.98206	0.98158	0.98587	0.99063	0.98877	0.99317	0.99277	0.99289	0.99318	0.99305	0.99358	0.99327	0.99326	0.99367	0.99342	0.99364	0.99500	0.99500
43	1.01168	0.99409	0.98196	0.98371	0.98367	0.99047	0.99266	0.98972	0.99267	0.99275	0.99319	0.99291	0.99357	0.99306	0.99322	0.99379	0.99340	0.99354	0.99500	0.99500
44	1.00795	0.99249	0.98433	0.98077	0.98499	0.99219	0.99099	0.98989	0.99253	0.99267	0.99308	0.99294	0.99338	0.99311	0.99321	0.99359	0.99337	0.99353	0.99500	0.99500
45	1.00274	0.99113	0.98236	0.98318	0.98537	0.99038	0.99068	0.99019	0.99243	0.99262	0.99301	0.99276	0.99329	0.99319	0.99311	0.99344	0.99325	0.99355	0.99500	0.99500
46	0.99908	0.99001	0.98253	0.98418	0.98572	0.99151	0.98978	0.99063	0.99247	0.99262	0.99294	0.99285	0.99304	0.99322	0.99312	0.99343	0.99323	0.99367	0.99500	0.99500
47	0.99350	0.98898	0.98304	0.98510	0.98609	0.99046	0.99152	0.99053	0.99262	0.99262	0.99288	0.99279	0.99320	0.99324	0.99313	0.99337	0.99348	0.99360	0.99500	0.99500
48	0.99365	0.98807	0.98343	0.98582	0.98790	0.98969	0.99173	0.99251	0.99099	0.99276	0.99288	0.99289	0.99324	0.99325	0.99328	0.99347	0.99357	0.99380	0.99500	0.99500
49	0.99226	0.98733	0.98473	0.98766	0.98752	0.99045	0.99258	0.99204	0.99120	0.99285	0.99298	0.99308	0.99329	0.99339	0.99341	0.99354	0.99373	0.99382	0.99500	0.99500
50	0.99276	0.98678	0.98652	0.98766	0.98931	0.99084	0.99196	0.99201	0.99164	0.99288	0.99298	0.99324	0.99331	0.99351	0.99358	0.99370	0.99386	0.99392	0.99500	0.99500
51	0.99309	0.98650	0.98649	0.98853	0.99041	0.99119	0.99242	0.99172	0.99194	0.99299	0.99304	0.99328	0.99340	0.99356	0.99371	0.99369	0.99391	0.99405	0.99500	0.99500
52	0.99316	0.98660	0.98648	0.98954	0.99120	0.99145	0.99207	0.99236	0.99197	0.99307	0.99302	0.99333	0.99344	0.99356	0.99377	0.99382	0.99398	0.99402	0.99500	0.99500
53	0.99313	0.98712	0.98833	0.99002	0.99167	0.99251	0.99186	0.99239	0.99293	0.99219	0.99309	0.99329	0.99343	0.99359	0.99383	0.99380	0.99400	0.99410	0.99500	0.99500
54	0.99269	0.98784	0.98831	0.99076	0.99265	0.99263	0.99217	0.99275	0.99261	0.99222	0.99310	0.99334	0.99341	0.99354	0.99380	0.99382	0.99398	0.99413	0.99500	0.99500
55	0.99255	0.98868	0.98903	0.99173	0.99297	0.99354	0.99241	0.99252	0.99249	0.99241	0.99312	0.99331	0.99346	0.99357	0.99385	0.99385	0.99399	0.99410	0.99500	0.99500
56	0.99297	0.98945	0.99012	0.99196	0.99354	0.99418	0.99257	0.99274	0.99232	0.99255	0.99319	0.99332	0.99343	0.99362	0.99385	0.99390	0.99400	0.99414	0.99500	0.99500
57	0.99291	0.99009	0.99134	0.99204	0.99427	0.99447	0.99266	0.99248	0.99257	0.99255	0.99310	0.99328	0.99345	0.99356	0.99380	0.99387	0.99399	0.99410	0.99500	0.99500
58	0.99285	0.99051	0.99138	0.99328	0.99464	0.99432	0.99323	0.99225	0.99247	0.99298	0.99252	0.99318	0.99335	0.99350	0.99369	0.99379	0.99392	0.99404	0.99500	0.99500
59	0.99292	0.99087	0.99222	0.99349	0.99500	0.99451	0.99321	0.99226	0.99257	0.99269	0.99245	0.99309	0.99323	0.99342	0.99359	0.99372	0.99382	0.99395	0.99500	0.99500
60	0.99308	0.99108	0.99281	0.99385	0.99536	0.99430	0.99356	0.99226	0.99231	0.99250	0.99241	0.99300	0.99310	0.99331	0.99348	0.99362	0.99373	0.99386	0.99500	0.99500

## Survivor Mortality Improvement Rates (cont'd)

Age	1990-94	1995-99	2000-04	2005-09	2010-14	2015-19	2020-24	2025-29	2030-34	2035-39	2040-44	2045-49	2050-54	2055-59	2060-64	2065-69	2070-74	2075-79	2080-84	2085-89
61	0.99342	0.99138	0.99322	0.99448	0.99528	0.99429	0.99385	0.99232	0.99234	0.99226	0.99250	0.99291	0.99307	0.99327	0.99341	0.99358	0.99369	0.99383	0.99500	0.99500
62	0.99385	0.99207	0.99408	0.99559	0.99633	0.99429	0.99409	0.99249	0.99249	0.99249	0.99256	0.99296	0.99313	0.99331	0.99348	0.99362	0.99377	0.99387	0.99500	0.99500
63	0.99501	0.99314	0.99551	0.99636	0.99628	0.99484	0.99415	0.99329	0.99246	0.99268	0.99308	0.99282	0.99328	0.99349	0.99361	0.99376	0.99392	0.99402	0.99500	0.99500
64	0.99592	0.99435	0.99677	0.99771	0.99665	0.99509	0.99454	0.99376	0.99278	0.99305	0.99321	0.99303	0.99349	0.99367	0.99380	0.99393	0.99410	0.99418	0.99500	0.99500
65	0.99711	0.99553	0.99795	0.99886	0.99708	0.99536	0.99468	0.99444	0.99309	0.99316	0.99333	0.99332	0.99366	0.99382	0.99398	0.99409	0.99423	0.99433	0.99500	0.99500
66	0.99779	0.99637	0.99876	0.99955	0.99745	0.99522	0.99486	0.99492	0.99335	0.99333	0.99332	0.99356	0.99377	0.99393	0.99407	0.99421	0.99434	0.99444	0.99500	0.99500
67	0.99828	0.99662	0.99909	0.99983	0.99768	0.99492	0.99510	0.99517	0.99353	0.99337	0.99350	0.99364	0.99381	0.99400	0.99413	0.99428	0.99441	0.99451	0.99500	0.99500
68	0.99862	0.99625	0.99888	0.99982	0.99723	0.99498	0.99509	0.99506	0.99411	0.99334	0.99386	0.99362	0.99382	0.99402	0.99416	0.99429	0.99443	0.99454	0.99500	0.99500
69	0.99854	0.99557	0.99838	0.99939	0.99700	0.99459	0.99506	0.99441	0.99340	0.99357	0.99378	0.99385	0.99401	0.99415	0.99428	0.99441	0.99455	0.99500	0.99500	0.99500
70	0.99851	0.99488	0.99782	0.99896	0.99674	0.99424	0.99486	0.99499	0.99480	0.99343	0.99350	0.99369	0.99370	0.99399	0.99413	0.99427	0.99441	0.99453	0.99500	0.99500
71	0.99863	0.99439	0.99736	0.99858	0.99643	0.99406	0.99451	0.99498	0.99510	0.99351	0.99347	0.99354	0.99380	0.99395	0.99411	0.99424	0.99440	0.99452	0.99500	0.99500
72	0.99876	0.99416	0.99692	0.99826	0.99615	0.99392	0.99414	0.99508	0.99526	0.99359	0.99341	0.99357	0.99381	0.99388	0.99409	0.99423	0.99439	0.99452	0.99500	0.99500
73	0.99868	0.99420	0.99660	0.99790	0.99603	0.99351	0.99408	0.99506	0.99508	0.99414	0.99336	0.99355	0.99391	0.99375	0.99407	0.99424	0.99437	0.99452	0.99500	0.99500
74	0.99853	0.99440	0.99631	0.99764	0.99580	0.99336	0.99374	0.99497	0.99508	0.99447	0.99342	0.99357	0.99385	0.99374	0.99406	0.99422	0.99438	0.99453	0.99500	0.99500
75	0.99856	0.99468	0.99612	0.99743	0.99570	0.99333	0.99352	0.99491	0.99511	0.99494	0.99353	0.99357	0.99381	0.99384	0.99411	0.99425	0.99441	0.99455	0.99500	0.99500
76	0.99883	0.99492	0.99593	0.99724	0.99558	0.99326	0.99344	0.99465	0.99518	0.99529	0.99367	0.99360	0.99372	0.99400	0.99410	0.99428	0.99442	0.99458	0.99500	0.99500
77	0.99880	0.99502	0.99558	0.99698	0.99537	0.99302	0.99321	0.99427	0.99525	0.99542	0.99371	0.99351	0.99370	0.99397	0.99399	0.99423	0.99438	0.99455	0.99500	0.99500
78	0.99904	0.99497	0.99525	0.99667	0.99497	0.99273	0.99259	0.99396	0.99509	0.99511	0.99411	0.99331	0.99352	0.99391	0.99376	0.99410	0.99427	0.99445	0.99500	0.99500
79	0.99914	0.99487	0.99495	0.99635	0.99461	0.99228	0.99214	0.99336	0.99482	0.99493	0.99435	0.99317	0.99335	0.99371	0.99360	0.99396	0.99415	0.99433	0.99500	0.99500
80	0.99966	0.99495	0.99477	0.99620	0.99429	0.99187	0.99170	0.99276	0.99442	0.99470	0.99457	0.99302	0.99310	0.99342	0.99351	0.99379	0.99400	0.99419	0.99500	0.99500
81	0.99998	0.99517	0.99470	0.99621	0.99416	0.99168	0.99145	0.99244	0.99397	0.99463	0.99479	0.99302	0.99299	0.99320	0.99358	0.99367	0.99393	0.99412	0.99500	0.99500
82	1.00055	0.99536	0.99473	0.99615	0.99421	0.99185	0.99156	0.99248	0.99383	0.99488	0.99511	0.99329	0.99312	0.99336	0.99373	0.99423	0.99440	0.99452	0.99500	0.99500
83	1.00122	0.99552	0.99470	0.99617	0.99425	0.99230	0.99216	0.99266	0.99414	0.99529	0.99529	0.99426	0.99348	0.99368	0.99408	0.99429	0.99443	0.99450	0.99500	0.99500
84	1.00194	0.99571	0.99475	0.99624	0.99477	0.99296	0.99278	0.99316	0.99438	0.99568	0.99569	0.99512	0.99397	0.99408	0.99440	0.99427	0.99456	0.99470	0.99500	0.99500
85	1.00287	0.99603	0.99488	0.99638	0.99513	0.99352	0.99336	0.99365	0.99458	0.99592	0.99604	0.99583	0.99440	0.99439	0.99461	0.99463	0.99480	0.99491	0.99500	0.99500
86	1.00339	0.99649	0.99522	0.99667	0.99548	0.99393	0.99376	0.99396	0.99474	0.99587	0.99627	0.99625	0.99472	0.99460	0.99470	0.99495	0.99491	0.99505	0.99500	0.99500
87	1.00401	0.99710	0.99577	0.99713	0.99576	0.99415	0.99395	0.99406	0.99472	0.99570	0.99635	0.99641	0.99493	0.99469	0.99481	0.99506	0.99493	0.99511	0.99500	0.99500
88	1.00397	0.99782	0.99627	0.99764	0.99607	0.99426	0.99411	0.99446	0.99548	0.99624	0.99614	0.99534	0.99471	0.99480	0.99485	0.99507	0.99490	0.99510	0.99500	0.99500
89	1.00426	0.99860	0.99701	0.99823	0.99635	0.99422	0.99388	0.99399	0.99426	0.99509	0.99597	0.99593	0.99533	0.99470	0.99475	0.99499	0.99506	0.99506	0.99500	0.99500
90	1.00440	0.99942	0.99772	0.99882	0.99658	0.99417	0.99374	0.99386	0.99409	0.99473	0.99562	0.99572	0.99559	0.99467	0.99466	0.99485	0.99487	0.99500	0.99500	0.99500
91	1.00450	1.00023	0.99840	0.99942	0.99683	0.99412	0.99362	0.99373	0.99393	0.99447	0.99523	0.99553	0.99555	0.99464	0.99458	0.99470	0.99491	0.99490	0.99500	0.99500
92	1.00458	1.00102	0.99899	1.00004	0.99709	0.99408	0.99354	0.99365	0.99379	0.99424	0.99492	0.99536	0.99545	0.99463	0.99453	0.99465	0.99488	0.99481	0.99500	0.99500
93	1.00467	1.00177	0.99968	1.00051	0.99733	0.99411	0.99351	0.99358	0.99376	0.99403	0.99469	0.99519	0.99521	0.99481	0.99450	0.99461	0.99483	0.99477	0.99500	0.99500
94	1.00476	1.00247	1.00026	1.00103	0.99760	0.99419	0.99353	0.99360	0.99375	0.99395	0.99448	0.99503	0.99507	0.99492	0.99453	0.99460	0.99480	0.99477	0.99500	0.99500
95	1.00483	1.00303	1.00072	1.00143	0.99781	0.99423	0.99355	0.99360	0.99375	0.99392	0.99432	0.99486	0.99498	0.99497	0.99455	0.99459	0.99475	0.99481	0.99500	0.99500
96	1.00489	1.00346	1.00111	1.00172	0.99798	0.99427	0.99356	0.99361	0.99375	0.99390	0.99423	0.99468	0.99490	0.99498	0.99456	0.99458	0.99469	0.99487	0.99500	0.99500
97	1.00492	1.00375	1.00135	1.00188	0.99811	0.99430	0.99356	0.99361	0.99375	0.99387	0.99415	0.99455	0.99484	0.99495	0.99459	0.99458	0.99470	0.99487	0.99500	0.99500
98	1.00494	1.00389	1.00146	1.00201	0.99814	0.99431	0.99357	0.99362	0.99374	0.99388	0.99407	0.99445	0.99477	0.99484	0.99470	0.99459	0.99469	0.99486	0.99500	0.99500
99	1.00495	1.00389	1.00145	1.00201	0.99816	0.99431	0.99358	0.99362	0.99375	0.99387	0.99403	0.99435	0.99469	0.99478	0.99476	0.99460	0.99469	0.99485	0.99500	0.99500
100	1.00495	1.00389	1.00145	1.00201	0.99816	0.99431	0.99357	0.99362	0.99374	0.99386	0.99401	0.99427	0.99461	0.99473	0.99479	0.99462	0.99469	0.99482	0.99500	0.99500
101	1.00496	1.00389	1.00143	1.00202	0.99816	0.99431	0.99357	0.99362	0.99374	0.99386	0.99399	0.99422	0.99451	0.99469	0.99479	0.99463	0.99468	0.99479	0.99500	0.99500
102	1.00496	1.00389	1.00143	1.00202	0.99816	0.99433	0.99358	0.99362	0.99374	0.99386	0.99398	0.99418	0.99444	0.99465	0.99477	0.99466	0.99479	0.99500	0.99500	0.99500
103	1.00496	1.00389	1.00118	1.00202	0.99815	0.99432	0.99357	0.99362	0.99374	0.99385	0.99398	0.99413	0.99438	0.99460	0.99470	0.99469	0.99479	0.99500	0.99500	0.99500
104	1.00497	1.00389	1.00143	1.00201	0.99815	0.99432	0.99357	0.99362	0.99374	0.99385	0.99398	0.99411	0.99432	0.99455	0.99466	0.99472	0.99469	0.99478	0.99500	0.99500
105	1.00497	1.00389	1.00143	1.00201	0.99815	0.99432	0.99358	0.99362	0.99374	0.99385	0.99397	0.99410	0.99428	0.99450	0.99462	0.99472	0.99469	0.99478	0.99500	0.99500
106	1.00497	1.00389	1.00057	1.00200	0.99815	0.99432	0.99358	0.99362	0.99374	0.99385	0.99397	0.99410	0.99426	0.99444	0.99459	0.99471	0.99469	0.99477	0.99500	0.99500
107	1.00498	1.00389	1.00083	1.00200	0.99816	0.99432	0.99358	0.99362	0.99374	0.99385	0.99397	0.99409	0.99423	0.99441	0.99457	0.99468	0.99470	0.99477	0.99500	0.99500
108	1.00498	1.00389	1.00045	1.00193	0.99815	0.99433	0.99357	0.99362	0.99374	0.99385	0.99397	0.99409	0.99422	0.99438	0.99453	0.99465	0.99471			

## APPENDIX K

### 100 YEAR PROJECTIONS

	<u>Page</u>
Total Active Duty Personnel.....	K-2
Total Active Duty Gross Pay .....	K-4
Nonretired Reservists.....	K-6
Total Number of Retirees.....	K-8
Total Annual Retired Pay .....	K-10
Retiree Gain Statement .....	K-12
Total Number of Survivors .....	K-14
Total Annual Survivor Benefits .....	K-16
Total Projected Basic Pay and Retired Outlays .....	K-18

#### Projection Notes:

- Columns in this appendix may not exactly add due to rounding.
- Although CRSC is not technically considered retired pay, it is paid from the MRF hence these projections include CRSC with retired pay.
- The following economic assumptions are applied to the projection of pay only (i.e. not people). This table is partially replicated from the table on page 21 in the main text.

#### ANNUAL ECONOMIC ASSUMPTIONS USED IN PROJECTIONS OF BASIC PAY AND RETIRED OUTLAY

Fiscal Year	Full COLA	Basic Pay
2008	2.3%	3.5%
2009	4.1	3.9
2010-11	2.2	3.9
2012-16	2.3	3.9
2017	3.0	3.9
2018+	3.0	3.75

**TOTAL ACTIVE DUTY PERSONNEL ON SEPTEMBER 30  
OF EACH FISCAL YEAR**

<u>Fiscal Year</u>	<u>Officers</u>	<u>Enlisted</u>	<u>Total</u>
2007	236,213	1,201,928	1,438,141
2008	236,447	1,197,045	1,433,492
2009	234,265	1,197,838	1,432,103
2010	236,025	1,206,643	1,442,668
2011	237,832	1,215,289	1,453,121
2012	239,394	1,214,643	1,454,037
2013	240,767	1,212,256	1,453,023
2014	240,767	1,212,256	1,453,023
2015	240,767	1,212,256	1,453,023
2016	240,767	1,212,256	1,453,023
2017	240,767	1,212,256	1,453,023
2018	240,767	1,212,256	1,453,023
2019	240,767	1,212,256	1,453,023
2020	240,767	1,212,256	1,453,023
2021	240,767	1,212,256	1,453,023
2022	240,767	1,212,256	1,453,023
2023	240,767	1,212,256	1,453,023
2024	240,767	1,212,256	1,453,023
2025	240,767	1,212,256	1,453,023
2026	240,767	1,212,256	1,453,023
2027	240,767	1,212,256	1,453,023
2028	240,767	1,212,256	1,453,023
2029	240,767	1,212,256	1,453,023
2030	240,767	1,212,256	1,453,023
2031	240,767	1,212,256	1,453,023
2032	240,767	1,212,256	1,453,023
2033	240,767	1,212,256	1,453,023
2034	240,767	1,212,256	1,453,023
2035	240,767	1,212,256	1,453,023
2036	240,767	1,212,256	1,453,023
2037	240,767	1,212,256	1,453,023
2038	240,767	1,212,256	1,453,023
2039	240,767	1,212,256	1,453,023
2040	240,767	1,212,256	1,453,023
2041	240,767	1,212,256	1,453,023
2042	240,767	1,212,256	1,453,023
2043	240,767	1,212,256	1,453,023
2044	240,767	1,212,256	1,453,023
2045	240,767	1,212,256	1,453,023
2046	240,767	1,212,256	1,453,023
2047	240,767	1,212,256	1,453,023
2048	240,767	1,212,256	1,453,023
2049	240,767	1,212,256	1,453,023
2050	240,767	1,212,256	1,453,023
2051	240,767	1,212,256	1,453,023
2052	240,767	1,212,256	1,453,023
2053	240,767	1,212,256	1,453,023
2054	240,767	1,212,256	1,453,023
2055	240,767	1,212,256	1,453,023
2056	240,767	1,212,256	1,453,023

\*Future mortality improvement is assumed.



**TOTAL ACTIVE DUTY PERSONNEL ON SEPTEMBER 30  
OF EACH FISCAL YEAR (continued)**

<u>Fiscal Year</u>	<u>Officers</u>	<u>Enlisted</u>	<u>Total</u>
2057	240,767	1,212,256	1,453,023
2058	240,767	1,212,256	1,453,023
2059	240,767	1,212,256	1,453,023
2060	240,767	1,212,256	1,453,023
2061	240,767	1,212,256	1,453,023
2062	240,767	1,212,256	1,453,023
2063	240,767	1,212,256	1,453,023
2064	240,767	1,212,256	1,453,023
2065	240,767	1,212,256	1,453,023
2066	240,767	1,212,256	1,453,023
2067	240,767	1,212,256	1,453,023
2068	240,767	1,212,256	1,453,023
2069	240,767	1,212,256	1,453,023
2070	240,767	1,212,256	1,453,023
2071	240,767	1,212,256	1,453,023
2072	240,767	1,212,256	1,453,023
2073	240,767	1,212,256	1,453,023
2074	240,767	1,212,256	1,453,023
2075	240,767	1,212,256	1,453,023
2076	240,767	1,212,256	1,453,023
2077	240,767	1,212,256	1,453,023
2078	240,767	1,212,256	1,453,023
2079	240,767	1,212,256	1,453,023
2080	240,767	1,212,256	1,453,023
2081	240,767	1,212,256	1,453,023
2082	240,767	1,212,256	1,453,023
2083	240,767	1,212,256	1,453,023
2084	240,767	1,212,256	1,453,023
2085	240,767	1,212,256	1,453,023
2086	240,767	1,212,256	1,453,023
2087	240,767	1,212,256	1,453,023
2088	240,767	1,212,256	1,453,023
2089	240,767	1,212,256	1,453,023
2090	240,767	1,212,256	1,453,023
2091	240,767	1,212,256	1,453,023
2092	240,767	1,212,256	1,453,023
2093	240,767	1,212,256	1,453,023
2094	240,767	1,212,256	1,453,023
2095	240,767	1,212,256	1,453,023
2096	240,767	1,212,256	1,453,023
2097	240,767	1,212,256	1,453,023
2098	240,767	1,212,256	1,453,023
2099	240,767	1,212,256	1,453,023
2100	240,767	1,212,256	1,453,023
2101	240,767	1,212,256	1,453,023
2102	240,767	1,212,256	1,453,023
2103	240,767	1,212,256	1,453,023
2104	240,767	1,212,256	1,453,023
2105	240,767	1,212,256	1,453,023
2106	240,767	1,212,256	1,453,023

\*Future mortality improvement is assumed.

# **TOTAL ACTIVE DUTY GROSS PAY FOR EACH FISCAL YEAR**

**(Dollar Amounts in Thousands)**

<u>Fiscal Year</u>	<u>Officer</u>	<u>Enlisted</u>	<u>Total</u>
2008	\$15,149,218	\$34,068,002	\$49,217,221
2009	\$15,601,788	\$34,990,251	\$50,592,039
2010	\$16,105,178	\$36,140,544	\$52,245,722
2011	\$16,714,937	\$37,478,653	\$54,193,590
2012	\$17,347,419	\$38,863,349	\$56,210,768
2013	\$18,008,160	\$40,212,414	\$58,220,573
2014	\$18,679,868	\$41,628,264	\$60,308,132
2015	\$19,353,957	\$43,157,224	\$62,511,181
2016	\$20,048,012	\$44,760,939	\$64,808,950
2017	\$20,759,713	\$46,412,452	\$67,172,165
2018	\$21,461,355	\$48,035,184	\$69,496,538
2019	\$22,193,354	\$49,702,581	\$71,895,934
2020	\$22,960,310	\$51,415,645	\$74,375,955
2021	\$23,765,380	\$53,186,741	\$76,952,121
2022	\$24,604,462	\$55,013,141	\$79,617,603
2023	\$25,475,245	\$56,862,180	\$82,337,425
2024	\$26,378,203	\$58,739,712	\$85,117,915
2025	\$27,334,787	\$60,758,509	\$88,093,295
2026	\$28,354,424	\$62,949,835	\$91,304,259
2027	\$29,429,923	\$65,246,946	\$94,676,869
2028	\$30,541,659	\$67,634,662	\$98,176,321
2029	\$31,696,125	\$70,122,929	\$101,819,053
2030	\$32,900,093	\$72,707,628	\$105,607,721
2031	\$34,132,026	\$75,380,306	\$109,512,332
2032	\$35,400,756	\$78,165,708	\$113,566,464
2033	\$36,718,482	\$81,075,343	\$117,793,824
2034	\$38,088,749	\$84,103,614	\$122,192,363
2035	\$39,518,111	\$87,260,923	\$126,779,034
2036	\$41,001,225	\$90,554,626	\$131,555,850
2037	\$42,531,622	\$93,972,133	\$136,503,755
2038	\$44,103,507	\$97,511,979	\$141,615,487
2039	\$45,725,692	\$101,179,533	\$146,905,225
2040	\$47,408,233	\$104,982,379	\$152,390,612
2041	\$49,148,185	\$108,923,463	\$158,071,648
2042	\$50,953,046	\$113,010,248	\$163,963,294
2043	\$52,825,461	\$117,245,094	\$170,070,555
2044	\$54,771,742	\$121,629,172	\$176,400,915
2045	\$56,800,326	\$126,177,314	\$182,977,640
2046	\$58,911,649	\$130,903,564	\$189,815,212
2047	\$61,113,045	\$135,810,147	\$196,923,191
2048	\$63,403,244	\$140,900,984	\$204,304,229
2049	\$65,783,951	\$146,182,831	\$211,966,782
2050	\$68,259,907	\$151,662,775	\$219,922,682
2051	\$70,829,322	\$157,346,015	\$228,175,336
2052	\$73,495,158	\$163,242,021	\$236,737,179
2053	\$76,263,094	\$169,359,936	\$245,623,029
2054	\$79,138,106	\$175,707,722	\$254,845,829
2055	\$82,126,076	\$182,295,275	\$264,421,350
2056	\$85,229,849	\$189,133,373	\$274,363,222
2057	\$88,449,831	\$196,229,548	\$284,679,380

\*Future mortality improvement is assumed.

**TOTAL ACTIVE DUTY GROSS PAY FOR EACH FISCAL YEAR (continued)**

(Dollar Amounts in Thousands)

<u>Fiscal Year</u>	<u>Officer</u>	<u>Enlisted</u>	<u>Total</u>
2058	\$91,785,897	\$203,592,223	\$295,378,120
2059	\$95,241,761	\$211,231,171	\$306,472,933
2060	\$98,824,407	\$219,157,167	\$317,981,574
2061	\$102,536,653	\$227,380,203	\$329,916,855
2062	\$106,383,474	\$235,911,587	\$342,295,061
2063	\$110,370,176	\$244,762,513	\$355,132,689
2064	\$114,502,613	\$253,944,057	\$368,446,671
2065	\$118,788,287	\$263,469,105	\$382,257,392
2066	\$123,232,867	\$273,351,697	\$396,584,564
2067	\$127,843,606	\$283,604,920	\$411,448,526
2068	\$132,626,720	\$294,242,293	\$426,869,013
2069	\$137,588,913	\$305,278,351	\$442,867,264
2070	\$142,738,252	\$316,728,197	\$459,466,449
2071	\$148,081,097	\$328,606,951	\$476,688,048
2072	\$153,624,741	\$340,930,801	\$494,555,542
2073	\$159,377,489	\$353,716,601	\$513,094,090
2074	\$165,348,216	\$366,981,633	\$532,329,849
2075	\$171,546,462	\$380,744,070	\$552,290,532
2076	\$177,980,882	\$395,023,005	\$573,003,887
2077	\$184,659,916	\$409,837,725	\$594,497,641
2078	\$191,591,228	\$425,208,197	\$616,799,424
2079	\$198,783,424	\$441,155,307	\$639,938,731
2080	\$206,246,586	\$457,700,779	\$663,947,365
2081	\$213,990,037	\$474,866,878	\$688,856,914
2082	\$222,023,719	\$492,676,813	\$714,700,532
2083	\$230,358,105	\$511,154,730	\$741,512,835
2084	\$239,004,159	\$530,325,559	\$769,329,717
2085	\$247,973,664	\$550,215,258	\$798,188,922
2086	\$257,278,422	\$570,850,916	\$828,129,338
2087	\$266,930,838	\$592,260,473	\$859,191,310
2088	\$276,943,669	\$614,472,875	\$891,416,545
2089	\$287,330,303	\$637,518,233	\$924,848,536
2090	\$298,105,128	\$661,427,814	\$959,532,942
2091	\$309,282,593	\$686,233,956	\$995,516,549
2092	\$320,877,727	\$711,970,264	\$1,032,847,991
2093	\$332,906,420	\$738,671,630	\$1,071,578,049
2094	\$345,385,408	\$766,374,230	\$1,111,759,638
2095	\$358,332,332	\$795,115,625	\$1,153,447,957
2096	\$371,765,184	\$824,934,847	\$1,196,700,031
2097	\$385,702,544	\$855,872,338	\$1,241,574,882
2098	\$400,163,325	\$887,970,038	\$1,288,133,363
2099	\$415,167,129	\$921,271,488	\$1,336,438,617
2100	\$430,734,611	\$955,821,886	\$1,386,556,497
2101	\$446,886,915	\$991,668,066	\$1,438,554,981
2102	\$463,645,927	\$1,028,858,613	\$1,492,504,540
2103	\$481,034,353	\$1,067,443,956	\$1,548,478,309
2104	\$499,075,743	\$1,107,476,398	\$1,606,552,141
2105	\$517,794,594	\$1,149,010,199	\$1,666,804,793
2106	\$537,216,156	\$1,192,101,681	\$1,729,317,836

\*Future mortality improvement is assumed.

# NONRETIRED RESERVISTS

(Dollar Amounts in Thousands)

Fiscal Year	People at Year End			Dollars During Year		
	Officers	Enlisted	Total	Officers	Enlisted	Total
2007	108,013	648,678	756,691			
2008	110,833	644,764	755,597	\$1,707,449	\$3,598,993	\$5,306,442
2009	115,476	645,974	761,450	\$1,818,399	\$3,729,190	\$5,547,589
2010	115,141	648,530	763,671	\$1,922,338	\$3,886,903	\$5,809,240
2011	114,513	650,194	764,707	\$1,985,304	\$4,058,238	\$6,043,542
2012	114,038	651,546	765,584	\$2,048,403	\$4,236,336	\$6,284,739
2013	114,463	653,631	768,094	\$2,119,214	\$4,419,876	\$6,539,090
2014	114,463	653,631	768,094	\$2,197,372	\$4,607,106	\$6,804,478
2015	114,463	653,631	768,094	\$2,275,693	\$4,799,791	\$7,075,484
2016	114,463	653,631	768,094	\$2,356,566	\$4,999,197	\$7,355,763
2017	114,463	653,631	768,094	\$2,440,505	\$5,205,882	\$7,646,388
2018	114,463	653,631	768,094	\$2,523,997	\$5,412,353	\$7,936,350
2019	114,463	653,631	768,094	\$2,610,666	\$5,626,026	\$8,236,692
2020	114,463	653,631	768,094	\$2,700,752	\$5,847,136	\$8,547,888
2021	114,463	653,631	768,094	\$2,794,631	\$6,076,242	\$8,870,873
2022	114,463	653,631	768,094	\$2,892,585	\$6,314,020	\$9,206,606
2023	114,463	653,631	768,094	\$2,995,010	\$6,561,249	\$9,556,259
2024	114,463	653,631	768,094	\$3,102,055	\$6,818,645	\$9,920,700
2025	114,463	653,631	768,094	\$3,213,880	\$7,086,726	\$10,300,606
2026	114,463	653,631	768,094	\$3,330,714	\$7,365,709	\$10,696,422
2027	114,463	653,631	768,094	\$3,452,569	\$7,655,574	\$11,108,144
2028	114,463	653,631	768,094	\$3,576,895	\$7,948,716	\$11,525,611
2029	114,463	653,631	768,094	\$3,704,569	\$8,249,290	\$11,953,859
2030	114,463	653,631	768,094	\$3,840,412	\$8,572,315	\$12,412,726
2031	114,463	653,631	768,094	\$3,981,432	\$8,907,616	\$12,889,048
2032	114,463	653,631	768,094	\$4,127,847	\$9,254,945	\$13,382,792
2033	114,463	653,631	768,094	\$4,280,103	\$9,614,152	\$13,894,255
2034	114,463	653,631	768,094	\$4,438,703	\$9,985,543	\$14,424,246
2035	114,463	653,631	768,094	\$4,603,921	\$10,369,465	\$14,973,386
2036	114,463	653,631	768,094	\$4,775,802	\$10,766,379	\$15,542,181
2037	114,463	653,631	768,094	\$4,954,285	\$11,176,963	\$16,131,248
2038	114,463	653,631	768,094	\$5,139,635	\$11,601,847	\$16,741,481
2039	114,463	653,631	768,094	\$5,332,234	\$12,041,818	\$17,374,052
2040	114,463	653,631	768,094	\$5,532,501	\$12,497,675	\$18,030,176
2041	114,463	653,631	768,094	\$5,740,865	\$12,970,311	\$18,711,176
2042	114,463	653,631	768,094	\$5,957,528	\$13,460,689	\$19,418,217
2043	114,463	653,631	768,094	\$6,182,612	\$13,969,451	\$20,152,063
2044	114,463	653,631	768,094	\$6,416,147	\$14,497,112	\$20,913,259
2045	114,463	653,631	768,094	\$6,658,073	\$15,043,831	\$21,701,905
2046	114,463	653,631	768,094	\$6,908,420	\$15,609,192	\$22,517,611
2047	114,463	653,631	768,094	\$7,167,948	\$16,194,504	\$23,362,452
2048	114,463	653,631	768,094	\$7,437,473	\$16,801,813	\$24,239,286
2049	114,463	653,631	768,094	\$7,717,028	\$17,431,929	\$25,148,957
2050	114,463	653,631	768,094	\$8,006,616	\$18,085,712	\$26,092,328
2051	114,463	653,631	768,094	\$8,307,011	\$18,764,004	\$27,071,015
2052	114,463	653,631	768,094	\$8,618,638	\$19,467,728	\$28,086,366
2053	114,463	653,631	768,094	\$8,941,921	\$20,197,840	\$29,139,761
2054	114,463	653,631	768,094	\$9,277,306	\$20,955,329	\$30,232,635
2055	114,463	653,631	768,094	\$9,625,251	\$21,741,223	\$31,366,474
2056	114,463	653,631	768,094	\$9,986,231	\$22,556,584	\$32,542,815
2057	114,463	653,631	768,094	\$10,360,738	\$23,402,512	\$33,763,250

# NONRETIRED RESERVISTS (continued)

(Dollar Amounts in Thousands)

Fiscal Year	People at Year End			Dollars During Year		
	Officers	Enlisted	Total	Officers	Enlisted	Total
2058	114,463	653,631	768,094	\$10,749,279	\$24,280,154	\$35,029,434
2059	114,463	653,631	768,094	\$11,152,385	\$25,190,700	\$36,343,085
2060	114,463	653,631	768,094	\$11,570,603	\$26,135,384	\$37,705,986
2061	114,463	653,631	768,094	\$12,004,500	\$27,115,488	\$39,119,988
2062	114,463	653,631	768,094	\$12,454,666	\$28,132,341	\$40,587,006
2063	114,463	653,631	768,094	\$12,921,711	\$29,187,321	\$42,109,032
2064	114,463	653,631	768,094	\$13,406,270	\$30,281,858	\$43,688,128
2065	114,463	653,631	768,094	\$13,909,000	\$31,417,436	\$45,326,436
2066	114,463	653,631	768,094	\$14,430,583	\$32,595,593	\$47,026,175
2067	114,463	653,631	768,094	\$14,971,725	\$33,817,925	\$48,789,651
2068	114,463	653,631	768,094	\$15,533,162	\$35,086,091	\$50,619,253
2069	114,463	653,631	768,094	\$16,115,653	\$36,401,810	\$52,517,463
2070	114,463	653,631	768,094	\$16,719,989	\$37,766,870	\$54,486,859
2071	114,463	653,631	768,094	\$17,346,988	\$39,183,123	\$56,530,111
2072	114,463	653,631	768,094	\$17,997,500	\$40,652,485	\$58,649,985
2073	114,463	653,631	768,094	\$18,672,407	\$42,176,949	\$60,849,356
2074	114,463	653,631	768,094	\$19,372,623	\$43,758,580	\$63,131,203
2075	114,463	653,631	768,094	\$20,099,098	\$45,399,522	\$65,498,620
2076	114,463	653,631	768,094	\$20,852,815	\$47,102,000	\$67,954,815
2077	114,463	653,631	768,094	\$21,634,797	\$48,868,321	\$70,503,118
2078	114,463	653,631	768,094	\$22,446,103	\$50,700,880	\$73,146,983
2079	114,463	653,631	768,094	\$23,287,833	\$52,602,160	\$75,889,993
2080	114,463	653,631	768,094	\$24,161,127	\$54,574,739	\$78,735,866
2081	114,463	653,631	768,094	\$25,067,170	\$56,621,290	\$81,688,460
2082	114,463	653,631	768,094	\$26,007,190	\$58,744,587	\$84,751,777
2083	114,463	653,631	768,094	\$26,982,460	\$60,947,508	\$87,929,968
2084	114,463	653,631	768,094	\$27,994,302	\$63,233,040	\$91,227,342
2085	114,463	653,631	768,094	\$29,044,089	\$65,604,279	\$94,648,368
2086	114,463	653,631	768,094	\$30,133,242	\$68,064,440	\$98,197,682
2087	114,463	653,631	768,094	\$31,263,238	\$70,616,857	\$101,880,096
2088	114,463	653,631	768,094	\$32,435,610	\$73,264,990	\$105,700,600
2089	114,463	653,631	768,094	\$33,651,945	\$76,012,428	\$109,664,373
2090	114,463	653,631	768,094	\$34,913,893	\$78,862,895	\$113,776,788
2091	114,463	653,631	768,094	\$36,223,164	\$81,820,254	\$118,043,418
2092	114,463	653,631	768,094	\$37,581,532	\$84,888,514	\$122,470,046
2093	114,463	653,631	768,094	\$38,990,840	\$88,071,834	\$127,062,673
2094	114,463	653,631	768,094	\$40,452,996	\$91,374,528	\$131,827,524
2095	114,463	653,631	768,094	\$41,969,983	\$94,801,074	\$136,771,057
2096	114,463	653,631	768,094	\$43,543,858	\$98,356,114	\$141,899,972
2097	114,463	653,631	768,094	\$45,176,752	\$102,044,469	\$147,221,221
2098	114,463	653,631	768,094	\$46,870,881	\$105,871,137	\$152,742,017
2099	114,463	653,631	768,094	\$48,628,539	\$109,841,305	\$158,469,843
2100	114,463	653,631	768,094	\$50,452,109	\$113,960,354	\$164,412,463
2101	114,463	653,631	768,094	\$52,344,063	\$118,233,867	\$170,577,930
2102	114,463	653,631	768,094	\$54,306,966	\$122,667,637	\$176,974,603
2103	114,463	653,631	768,094	\$56,343,477	\$127,267,674	\$183,611,151
2104	114,463	653,631	768,094	\$58,456,357	\$132,040,212	\$190,496,569
2105	114,463	653,631	768,094	\$60,648,471	\$136,991,720	\$197,640,191
2106	114,463	653,631	768,094	\$62,922,789	\$142,128,910	\$205,051,699

**TOTAL NUMBER OF RETIREES ON SEPTEMBER 30 OF EACH FISCAL YEAR**

Fiscal Year	Nondisabled			Disabled			Grand Total
	Officers	Enlisted	Total	Officers	Enlisted	Total	
2007	499,426	1,274,946	1,774,372	19,970	65,335	85,305	1,859,677
2008	502,783	1,290,805	1,793,588	18,900	63,554	82,454	1,876,043
2009	505,164	1,303,711	1,808,874	17,910	61,821	79,731	1,888,605
2010	506,250	1,313,161	1,819,411	16,994	60,130	77,123	1,896,535
2011	506,543	1,318,804	1,825,347	16,161	58,477	74,638	1,899,985
2012	506,672	1,322,876	1,829,549	15,419	56,921	72,340	1,901,889
2013	512,500	1,337,451	1,849,951	14,754	55,485	70,239	1,920,190
2014	512,517	1,337,126	1,849,643	14,165	54,095	68,260	1,917,903
2015	512,510	1,335,908	1,848,418	13,646	52,758	66,404	1,914,822
2016	512,324	1,335,146	1,847,470	13,191	51,489	64,680	1,912,151
2017	511,919	1,334,842	1,846,761	12,793	50,293	63,086	1,909,848
2018	511,410	1,334,820	1,846,229	12,445	49,167	61,612	1,907,841
2019	510,906	1,335,398	1,846,304	12,141	48,106	60,247	1,906,551
2020	510,321	1,336,448	1,846,769	11,870	47,108	58,979	1,905,747
2021	509,630	1,337,096	1,846,726	11,628	46,163	57,791	1,904,518
2022	508,939	1,337,960	1,846,900	11,409	45,272	56,681	1,903,581
2023	508,298	1,339,626	1,847,924	11,209	44,446	55,655	1,903,578
2024	507,198	1,340,139	1,847,337	11,023	43,663	54,686	1,902,023
2025	505,590	1,337,020	1,842,610	10,846	42,890	53,736	1,896,347
2026	503,641	1,332,895	1,836,535	10,679	42,144	52,824	1,889,359
2027	501,338	1,328,027	1,829,364	10,521	41,438	51,959	1,881,323
2028	504,858	1,337,463	1,842,320	10,375	40,777	51,153	1,893,473
2029	502,542	1,333,412	1,835,954	10,238	40,162	50,399	1,886,353
2030	500,264	1,329,035	1,829,299	10,111	39,592	49,703	1,879,001
2031	498,096	1,324,304	1,822,400	9,996	39,064	49,060	1,871,460
2032	496,063	1,319,298	1,815,361	9,891	38,571	48,462	1,863,823
2033	494,155	1,314,253	1,808,408	9,795	38,110	47,905	1,856,313
2034	492,239	1,309,447	1,801,686	9,708	37,684	47,392	1,849,078
2035	490,358	1,304,637	1,794,995	9,631	37,291	46,922	1,841,917
2036	488,590	1,299,989	1,788,579	9,563	36,932	46,495	1,835,074
2037	486,940	1,295,560	1,782,500	9,505	36,609	46,115	1,828,614
2038	485,465	1,291,416	1,776,881	9,456	36,321	45,778	1,822,659
2039	484,049	1,287,405	1,771,454	9,416	36,066	45,482	1,816,936
2040	482,760	1,283,564	1,766,324	9,383	35,842	45,225	1,811,549
2041	481,555	1,279,795	1,761,350	9,357	35,647	45,004	1,806,354
2042	480,431	1,276,108	1,756,539	9,337	35,478	44,815	1,801,355
2043	479,424	1,272,632	1,752,056	9,322	35,336	44,658	1,796,714
2044	478,491	1,269,360	1,747,851	9,312	35,217	44,529	1,792,379
2045	477,660	1,266,167	1,743,827	9,305	35,117	44,422	1,788,248
2046	476,900	1,263,132	1,740,033	9,300	35,035	44,335	1,784,367
2047	476,222	1,260,297	1,736,519	9,298	34,968	44,266	1,780,785
2048	475,668	1,257,735	1,733,403	9,298	34,916	44,214	1,777,617
2049	475,198	1,255,462	1,730,659	9,299	34,876	44,175	1,774,834
2050	474,844	1,253,550	1,728,394	9,302	34,847	44,149	1,772,543
2051	474,602	1,251,988	1,726,590	9,306	34,827	44,133	1,770,723
2052	474,459	1,250,798	1,725,257	9,310	34,816	44,126	1,769,383
2053	474,407	1,249,996	1,724,403	9,315	34,810	44,126	1,768,529
2054	474,433	1,249,616	1,724,049	9,321	34,810	44,131	1,768,181
2055	474,527	1,249,641	1,724,168	9,327	34,815	44,142	1,768,310
2056	474,697	1,250,074	1,724,770	9,334	34,822	44,156	1,768,926

\*This projection includes retired from active and reserve duty.

\*\*Future mortality improvement is assumed.

\*\*\*The number of retirees projected only considers those receiving non-zero retired pay from the Military Retirement Fund.

\*\*\*\*Disabled numbers do not include retirees as of 9/30/2007 moving from zero to non-zero retired pay as a result of Section 641 of NDAA 2008. However, they are included in the actuarial accrued liability.

**TOTAL NUMBER OF RETIREES ON SEPTEMBER 30 OF EACH FISCAL YEAR (continued)**

Fiscal Year	Nondisabled			Disabled			Grand Total
	Officers	Enlisted	Total	Officers	Enlisted	Total	
2057	474,949	1,250,907	1,725,856	9,341	34,832	44,174	1,770,030
2058	475,302	1,252,131	1,727,433	9,349	34,845	44,193	1,771,627
2059	475,740	1,253,705	1,729,445	9,357	34,858	44,215	1,773,661
2060	476,270	1,255,600	1,731,870	9,366	34,873	44,239	1,776,109
2061	476,885	1,257,765	1,734,650	9,375	34,888	44,263	1,778,913
2062	477,579	1,260,152	1,737,731	9,384	34,903	44,287	1,782,018
2063	478,351	1,262,719	1,741,071	9,394	34,918	44,312	1,785,382
2064	479,185	1,265,427	1,744,612	9,403	34,933	44,336	1,788,948
2065	480,074	1,268,225	1,748,299	9,412	34,947	44,359	1,792,657
2066	481,004	1,271,072	1,752,076	9,420	34,960	44,380	1,796,457
2067	481,964	1,273,937	1,755,901	9,428	34,973	44,401	1,800,302
2068	482,947	1,276,793	1,759,740	9,435	34,985	44,420	1,804,160
2069	483,939	1,279,615	1,763,553	9,441	34,996	44,438	1,807,991
2070	484,931	1,282,393	1,767,324	9,447	35,006	44,453	1,811,777
2071	485,914	1,285,120	1,771,033	9,452	35,016	44,467	1,815,501
2072	486,878	1,287,796	1,774,674	9,455	35,024	44,480	1,819,153
2073	487,816	1,290,424	1,778,241	9,458	35,032	44,490	1,822,731
2074	488,720	1,293,012	1,781,732	9,460	35,039	44,499	1,826,231
2075	489,584	1,295,563	1,785,147	9,462	35,045	44,507	1,829,654
2076	490,405	1,298,080	1,788,485	9,462	35,050	44,513	1,832,997
2077	491,185	1,300,564	1,791,749	9,463	35,055	44,517	1,836,266
2078	491,927	1,303,016	1,794,944	9,462	35,059	44,521	1,839,465
2079	492,633	1,305,431	1,798,064	9,462	35,062	44,524	1,842,588
2080	493,307	1,307,800	1,801,107	9,461	35,065	44,526	1,845,633
2081	493,950	1,310,102	1,804,052	9,460	35,067	44,527	1,848,580
2082	494,567	1,312,335	1,806,901	9,459	35,069	44,528	1,851,430
2083	495,163	1,314,496	1,809,659	9,459	35,070	44,529	1,854,188
2084	495,743	1,316,589	1,812,332	9,458	35,072	44,530	1,856,862
2085	496,311	1,318,620	1,814,931	9,458	35,073	44,530	1,859,461
2086	496,873	1,320,597	1,817,470	9,457	35,073	44,531	1,862,001
2087	497,430	1,322,529	1,819,959	9,457	35,074	44,531	1,864,491
2088	497,988	1,324,421	1,822,409	9,457	35,074	44,532	1,866,941
2089	498,548	1,326,277	1,824,825	9,458	35,075	44,532	1,869,358
2090	499,111	1,328,101	1,827,213	9,458	35,075	44,533	1,871,746
2091	499,680	1,329,898	1,829,579	9,459	35,075	44,534	1,874,113
2092	500,255	1,331,671	1,831,926	9,459	35,076	44,535	1,876,461
2093	500,834	1,333,422	1,834,257	9,460	35,076	44,536	1,878,793
2094	501,418	1,335,156	1,836,574	9,460	35,076	44,537	1,881,111
2095	502,004	1,336,874	1,838,878	9,461	35,077	44,538	1,883,416
2096	502,593	1,338,581	1,841,173	9,461	35,077	44,539	1,885,712
2097	503,182	1,340,279	1,843,461	9,462	35,078	44,539	1,888,000
2098	503,770	1,341,970	1,845,740	9,462	35,078	44,540	1,890,280
2099	504,356	1,343,653	1,848,009	9,463	35,078	44,541	1,892,550
2100	504,940	1,345,329	1,850,269	9,463	35,079	44,542	1,894,811
2101	505,521	1,347,000	1,852,521	9,463	35,079	44,542	1,897,063
2102	506,098	1,348,670	1,854,768	9,463	35,080	44,543	1,899,310
2103	506,671	1,350,337	1,857,008	9,463	35,080	44,543	1,901,551
2104	507,239	1,352,004	1,859,242	9,463	35,081	44,543	1,903,786
2105	507,803	1,353,668	1,861,471	9,463	35,081	44,544	1,906,015
2106	508,362	1,355,332	1,863,694	9,463	35,081	44,544	1,908,238

\*This projection includes retired from active and reserve duty.

\*\*Future mortality improvement is assumed.

\*\*\*The number of retirees projected only considers those receiving non-zero retired pay from the Military Retirement Fund.

\*\*\*\*Disabled numbers do not include retirees as of 9/30/2007 moving from zero to non-zero retired pay as a result of Section 641 of NDAA 2008. However, they are included in the actuarial accrued liability.

# TOTAL ANNUAL RETIRED PAY FOR EACH FISCAL YEAR

(Dollar Amounts in Thousands)

Fiscal Year	Nondisabled			Disabled			Grand Total
	Officers	Enlisted	Total	Officers	Enlisted	Total	
2008	\$18,461,190	\$23,546,504	\$42,007,694	\$591,144	\$754,809	\$1,345,953	\$43,353,647
2009	\$19,252,993	\$24,470,201	\$43,723,194	\$580,474	\$747,039	\$1,327,513	\$45,050,708
2010	\$19,893,976	\$25,472,940	\$45,366,917	\$563,700	\$752,244	\$1,315,944	\$46,682,861
2011	\$20,427,040	\$26,284,310	\$46,711,350	\$544,141	\$749,264	\$1,293,405	\$48,004,755
2012	\$20,973,965	\$27,070,499	\$48,044,464	\$526,776	\$746,268	\$1,273,045	\$49,317,509
2013	\$21,630,388	\$27,934,739	\$49,565,127	\$511,625	\$743,880	\$1,255,505	\$50,820,632
2014	\$22,302,289	\$28,781,296	\$51,083,585	\$498,492	\$741,854	\$1,240,346	\$52,323,931
2015	\$22,920,179	\$29,550,070	\$52,470,249	\$487,797	\$740,492	\$1,228,289	\$53,698,538
2016	\$23,556,341	\$30,342,423	\$53,898,764	\$479,446	\$740,088	\$1,219,534	\$55,118,298
2017	\$24,332,371	\$31,332,594	\$55,664,965	\$475,733	\$744,680	\$1,220,413	\$56,885,378
2018	\$25,171,801	\$32,417,837	\$57,589,638	\$474,753	\$751,533	\$1,226,286	\$58,815,924
2019	\$26,037,076	\$33,553,364	\$59,590,440	\$475,600	\$759,568	\$1,235,168	\$60,825,608
2020	\$26,926,091	\$34,740,694	\$61,666,785	\$478,009	\$768,791	\$1,246,800	\$62,913,585
2021	\$27,835,179	\$35,971,468	\$63,806,647	\$481,783	\$779,094	\$1,260,877	\$65,067,524
2022	\$28,766,029	\$37,245,185	\$66,011,214	\$486,795	\$790,514	\$1,277,309	\$67,288,523
2023	\$29,725,115	\$38,586,431	\$68,311,546	\$492,910	\$803,399	\$1,296,309	\$69,607,855
2024	\$30,703,022	\$39,974,310	\$70,677,332	\$500,020	\$817,754	\$1,317,774	\$71,995,106
2025	\$31,683,893	\$41,334,302	\$73,018,195	\$507,875	\$832,640	\$1,340,515	\$74,358,710
2026	\$32,665,938	\$42,671,530	\$75,337,468	\$516,379	\$847,661	\$1,364,040	\$76,701,508
2027	\$33,662,297	\$44,031,558	\$77,693,855	\$525,544	\$863,442	\$1,388,986	\$79,082,841
2028	\$34,861,519	\$45,567,643	\$80,429,162	\$535,588	\$880,368	\$1,415,956	\$81,845,118
2029	\$36,080,610	\$47,147,094	\$83,227,704	\$546,578	\$898,558	\$1,445,136	\$84,672,840
2030	\$37,218,272	\$48,746,003	\$85,964,275	\$558,506	\$918,229	\$1,476,735	\$87,441,010
2031	\$38,403,094	\$50,390,532	\$88,793,626	\$571,602	\$939,371	\$1,510,973	\$90,304,599
2032	\$39,638,134	\$52,079,631	\$91,717,765	\$585,833	\$961,895	\$1,547,728	\$93,265,493
2033	\$40,926,062	\$53,824,536	\$94,750,598	\$601,226	\$985,699	\$1,586,925	\$96,337,523
2034	\$42,254,306	\$55,624,047	\$97,878,353	\$617,851	\$1,010,782	\$1,628,633	\$99,506,986
2035	\$43,619,637	\$57,471,122	\$101,090,759	\$635,749	\$1,037,204	\$1,672,953	\$102,763,712
2036	\$45,033,870	\$59,374,229	\$104,408,099	\$654,869	\$1,065,113	\$1,719,982	\$106,128,081
2037	\$46,505,157	\$61,349,707	\$107,854,864	\$675,407	\$1,094,756	\$1,770,163	\$109,625,027
2038	\$48,037,722	\$63,401,798	\$111,439,520	\$697,492	\$1,126,347	\$1,823,839	\$113,263,359
2039	\$49,624,683	\$65,533,471	\$115,158,154	\$721,044	\$1,159,953	\$1,880,997	\$117,039,151
2040	\$51,269,380	\$67,749,940	\$119,019,320	\$746,068	\$1,195,613	\$1,941,681	\$120,961,001
2041	\$52,980,340	\$70,053,991	\$123,034,331	\$772,545	\$1,233,347	\$2,005,892	\$125,040,223
2042	\$54,763,276	\$72,448,470	\$127,211,746	\$800,402	\$1,273,088	\$2,073,490	\$129,285,236
2043	\$56,623,876	\$74,937,245	\$131,561,121	\$829,560	\$1,314,896	\$2,144,456	\$133,705,577
2044	\$58,560,355	\$77,529,514	\$136,089,869	\$859,974	\$1,358,870	\$2,218,844	\$138,308,713
2045	\$60,577,159	\$80,227,873	\$140,805,032	\$891,657	\$1,404,964	\$2,296,621	\$143,101,653
2046	\$62,678,546	\$83,035,447	\$145,713,993	\$924,535	\$1,453,148	\$2,377,683	\$148,091,676
2047	\$64,863,703	\$85,958,057	\$150,821,760	\$958,601	\$1,503,526	\$2,462,127	\$153,283,887
2048	\$67,131,975	\$88,991,909	\$156,123,884	\$993,891	\$1,556,178	\$2,550,069	\$158,673,953
2049	\$69,490,289	\$92,133,472	\$161,623,761	\$1,030,429	\$1,611,203	\$2,641,632	\$164,265,393
2050	\$71,947,722	\$95,399,912	\$167,347,634	\$1,068,261	\$1,668,634	\$2,736,895	\$170,084,529
2051	\$74,513,988	\$98,811,266	\$173,325,254	\$1,107,447	\$1,728,540	\$2,835,987	\$176,161,241
2052	\$77,186,491	\$102,379,830	\$179,566,321	\$1,148,037	\$1,790,989	\$2,939,026	\$182,505,347
2053	\$79,968,932	\$106,112,746	\$186,081,678	\$1,190,101	\$1,856,028	\$3,046,129	\$189,127,807
2054	\$82,865,471	\$110,013,303	\$192,878,774	\$1,233,691	\$1,923,714	\$3,157,405	\$196,036,179
2055	\$85,879,638	\$114,087,897	\$199,967,535	\$1,278,925	\$1,994,148	\$3,273,073	\$203,240,608
2056	\$89,019,476	\$118,343,365	\$207,362,841	\$1,325,855	\$2,067,394	\$3,393,249	\$210,756,090
2057	\$92,294,911	\$122,791,636	\$215,086,547	\$1,374,639	\$2,143,538	\$3,518,177	\$218,604,724

\*This projection includes retired from active and reserve duty.

\*\*Future mortality improvement is assumed.

\*\*\*Disabled pay does not include an estimated \$57 million CRSC pay as of 9/30/2007 due to Section 641 of NDAA 2008.

However, it is accounted for in the actuarial accrued liability.



**TOTAL ANNUAL RETIRED PAY FOR EACH FISCAL YEAR (continued)**

(Dollar Amounts in Thousands)

Fiscal Year	Nondisabled			Disabled			Grand Total
	Officers	Enlisted	Total	Officers	Enlisted	Total	
2058	\$95,716,543	\$127,443,339	\$223,159,882	\$1,425,411	\$2,222,694	\$3,648,105	\$226,807,987
2059	\$99,291,413	\$132,306,521	\$231,597,934	\$1,478,287	\$2,304,958	\$3,783,245	\$235,381,179
2060	\$103,030,787	\$137,388,543	\$240,419,330	\$1,533,368	\$2,390,465	\$3,923,833	\$244,343,163
2061	\$106,937,692	\$142,693,826	\$249,631,518	\$1,590,727	\$2,479,344	\$4,070,071	\$253,701,589
2062	\$111,020,846	\$148,232,277	\$259,253,123	\$1,650,502	\$2,571,716	\$4,222,218	\$263,475,341
2063	\$115,289,185	\$154,012,409	\$269,301,594	\$1,712,761	\$2,667,699	\$4,380,460	\$273,682,054
2064	\$119,747,858	\$160,041,396	\$279,789,254	\$1,777,559	\$2,767,410	\$4,544,969	\$284,334,223
2065	\$124,404,036	\$166,324,950	\$290,728,986	\$1,844,923	\$2,870,982	\$4,715,905	\$295,444,891
2066	\$129,260,131	\$172,867,401	\$302,127,532	\$1,914,910	\$2,978,575	\$4,893,485	\$307,021,017
2067	\$134,322,856	\$179,674,607	\$313,997,463	\$1,987,584	\$3,090,323	\$5,077,907	\$319,075,370
2068	\$139,599,685	\$186,751,891	\$326,351,576	\$2,063,014	\$3,206,365	\$5,269,379	\$331,620,955
2069	\$145,095,148	\$194,105,551	\$339,200,699	\$2,141,269	\$3,326,835	\$5,468,104	\$344,668,803
2070	\$150,812,519	\$201,745,201	\$352,557,720	\$2,222,384	\$3,451,873	\$5,674,257	\$358,231,977
2071	\$156,757,003	\$209,681,266	\$366,438,269	\$2,306,467	\$3,581,662	\$5,888,129	\$372,326,398
2072	\$162,931,916	\$217,924,340	\$380,856,256	\$2,393,603	\$3,716,358	\$6,109,961	\$386,966,217
2073	\$169,342,361	\$226,486,362	\$395,828,723	\$2,483,862	\$3,856,115	\$6,339,977	\$402,168,700
2074	\$175,994,334	\$235,380,030	\$411,374,364	\$2,577,333	\$4,001,127	\$6,578,460	\$417,952,824
2075	\$182,893,418	\$244,619,111	\$427,512,529	\$2,674,117	\$4,151,597	\$6,825,714	\$434,338,243
2076	\$190,046,246	\$254,218,307	\$444,264,553	\$2,774,364	\$4,307,726	\$7,082,090	\$451,346,643
2077	\$197,461,633	\$264,191,969	\$461,653,602	\$2,878,209	\$4,469,735	\$7,347,944	\$469,001,546
2078	\$205,149,411	\$274,555,054	\$479,704,465	\$2,985,806	\$4,637,834	\$7,623,640	\$487,328,105
2079	\$213,119,508	\$285,320,215	\$498,439,723	\$3,097,330	\$4,812,188	\$7,909,518	\$506,349,241
2080	\$221,382,691	\$296,499,902	\$517,882,593	\$3,212,970	\$4,993,063	\$8,206,033	\$526,088,626
2081	\$229,951,474	\$308,106,002	\$538,057,476	\$3,332,935	\$5,180,673	\$8,513,608	\$546,571,084
2082	\$238,837,450	\$320,150,535	\$558,987,985	\$3,457,427	\$5,375,294	\$8,832,721	\$567,820,706
2083	\$248,054,790	\$332,648,972	\$580,703,762	\$3,586,644	\$5,577,186	\$9,163,830	\$589,867,592
2084	\$257,618,273	\$345,618,182	\$603,236,455	\$3,720,775	\$5,786,621	\$9,507,396	\$612,743,851
2085	\$267,543,704	\$359,076,609	\$626,620,313	\$3,860,021	\$6,003,885	\$9,863,906	\$636,484,219
2086	\$277,847,860	\$373,044,270	\$650,892,130	\$4,004,585	\$6,229,272	\$10,233,857	\$661,125,987
2087	\$288,547,675	\$387,542,110	\$676,089,785	\$4,154,678	\$6,463,093	\$10,617,771	\$686,707,556
2088	\$299,660,874	\$402,591,273	\$702,252,147	\$4,310,518	\$6,705,670	\$11,016,188	\$713,268,335
2089	\$311,205,284	\$418,213,495	\$729,418,779	\$4,472,316	\$6,957,328	\$11,429,644	\$740,848,423
2090	\$323,198,430	\$434,431,256	\$757,629,686	\$4,640,285	\$7,218,413	\$11,858,698	\$769,488,384
2091	\$335,658,890	\$451,268,079	\$786,926,969	\$4,814,643	\$7,489,309	\$12,303,952	\$799,230,921
2092	\$348,605,461	\$468,748,450	\$817,353,911	\$4,995,616	\$7,770,375	\$12,765,991	\$830,119,902
2093	\$362,056,907	\$486,897,541	\$848,954,448	\$5,183,436	\$8,061,997	\$13,245,433	\$862,199,881
2094	\$376,032,189	\$505,741,703	\$881,773,892	\$5,378,335	\$8,364,542	\$13,742,877	\$895,516,769
2095	\$390,550,588	\$525,308,452	\$915,859,040	\$5,580,549	\$8,678,442	\$14,258,991	\$930,118,031
2096	\$405,632,020	\$545,626,529	\$951,258,549	\$5,790,327	\$9,004,124	\$14,794,451	\$966,053,000
2097	\$421,297,206	\$566,726,026	\$988,023,232	\$6,007,933	\$9,342,031	\$15,349,964	\$1,003,373,196
2098	\$437,567,305	\$588,637,576	\$1,026,204,881	\$6,233,645	\$9,692,621	\$15,926,266	\$1,042,131,147
2099	\$454,464,140	\$611,392,197	\$1,065,856,337	\$6,467,758	\$10,056,366	\$16,524,124	\$1,082,380,461
2100	\$472,010,369	\$635,022,614	\$1,107,032,983	\$6,710,582	\$10,433,759	\$17,144,341	\$1,124,177,324
2101	\$490,230,094	\$659,563,057	\$1,149,793,151	\$6,962,442	\$10,825,312	\$17,787,754	\$1,167,580,905
2102	\$509,148,107	\$685,049,370	\$1,194,197,477	\$7,223,680	\$11,231,554	\$18,455,234	\$1,212,652,711
2103	\$528,790,345	\$711,518,423	\$1,240,308,768	\$7,494,652	\$11,653,037	\$19,147,689	\$1,259,456,457
2104	\$549,183,806	\$739,008,257	\$1,288,192,063	\$7,775,727	\$12,090,330	\$19,866,057	\$1,308,058,120
2105	\$570,356,836	\$767,558,280	\$1,337,915,116	\$8,067,294	\$12,544,026	\$20,611,320	\$1,358,526,436
2106	\$592,339,347	\$797,209,304	\$1,389,548,651	\$8,369,757	\$13,014,740	\$21,384,497	\$1,410,933,148

\*This projection includes retired from active and reserve duty.

\*\*Future mortality improvement is assumed.

\*\*\*Disabled pay does not include an estimated \$57 million CRSC pay as of 9/30/2007 due to Section 641 of NDAA 2008.

However, it is accounted for in the actuarial accrued liability.

# **RETIREE GAIN STATEMENT**

Fiscal Year	Gains During the Fiscal Year				Average Starting Net Retired Pay Before CPI Increase			
	Nondisabled		Disabled		Nondisabled		Disabled	
	Officers	Enlisted	Officers	Enlisted	Officers	Enlisted	Officers	Enlisted
2008	17,788	45,348	442	2,799	\$35,720	\$18,038	\$35,488	\$14,067
2009	16,990	43,419	442	2,757	\$35,905	\$18,671	\$36,346	\$14,471
2010	15,819	40,940	441	2,739	\$38,593	\$19,680	\$37,677	\$14,903
2011	15,072	38,039	440	2,724	\$40,953	\$20,747	\$39,020	\$15,349
2012	14,916	37,313	444	2,728	\$43,014	\$21,788	\$40,366	\$15,822
2013	20,602	48,642	446	2,725	\$40,379	\$20,199	\$41,782	\$16,373
2014	14,763	34,531	446	2,709	\$47,141	\$24,065	\$43,183	\$16,918
2015	14,694	34,314	446	2,699	\$49,108	\$24,848	\$44,745	\$17,467
2016	14,443	35,359	445	2,704	\$51,064	\$25,579	\$46,417	\$18,058
2017	14,166	36,363	443	2,717	\$53,372	\$26,333	\$48,070	\$18,716
2018	14,027	37,141	441	2,727	\$55,289	\$27,143	\$49,780	\$19,411
2019	14,025	38,202	439	2,735	\$56,973	\$28,037	\$51,495	\$20,146
2020	13,966	39,120	437	2,741	\$58,500	\$28,738	\$53,135	\$20,882
2021	13,895	39,105	434	2,740	\$60,185	\$29,721	\$54,820	\$21,642
2022	13,951	39,651	432	2,742	\$61,644	\$30,686	\$56,579	\$22,428
2023	14,074	40,735	431	2,758	\$63,288	\$31,910	\$58,420	\$23,286
2024	13,703	39,825	428	2,757	\$65,716	\$33,050	\$60,338	\$24,146
2025	13,292	36,401	425	2,723	\$67,889	\$34,367	\$62,228	\$24,892
2026	13,050	35,579	422	2,705	\$69,874	\$35,568	\$64,164	\$25,626
2027	12,800	35,003	421	2,699	\$72,616	\$36,988	\$66,282	\$26,486
2028	18,736	49,496	423	2,704	\$64,424	\$32,269	\$68,402	\$27,338
2029	13,016	36,199	423	2,709	\$76,683	\$38,520	\$70,744	\$28,267
2030	13,162	36,009	425	2,716	\$79,775	\$40,220	\$73,125	\$29,254
2031	13,370	35,789	428	2,721	\$82,703	\$41,655	\$75,910	\$30,301
2032	13,597	35,643	430	2,719	\$85,278	\$43,071	\$78,760	\$31,374
2033	13,800	35,734	431	2,716	\$88,158	\$44,516	\$81,768	\$32,475
2034	13,853	36,103	432	2,715	\$91,034	\$45,769	\$85,046	\$33,602
2035	13,926	36,224	433	2,714	\$94,116	\$46,917	\$88,336	\$34,777
2036	14,052	36,508	433	2,714	\$97,621	\$48,534	\$91,642	\$36,059
2037	14,156	36,830	436	2,715	\$101,200	\$50,219	\$95,523	\$37,430
2038	14,291	37,181	437	2,717	\$105,283	\$52,036	\$99,337	\$38,860
2039	14,280	37,331	438	2,719	\$108,592	\$53,941	\$103,227	\$40,338
2040	14,312	37,467	438	2,720	\$112,948	\$56,063	\$107,269	\$41,870
2041	14,289	37,475	439	2,721	\$117,482	\$58,259	\$111,466	\$43,451
2042	14,242	37,441	438	2,721	\$122,378	\$60,537	\$115,643	\$45,080
2043	14,216	37,495	438	2,723	\$127,553	\$62,981	\$119,868	\$46,783
2044	14,139	37,508	437	2,724	\$132,330	\$65,579	\$124,238	\$48,559
2045	14,084	37,363	437	2,723	\$138,190	\$68,390	\$128,755	\$50,385
2046	14,013	37,301	436	2,722	\$143,520	\$71,421	\$133,403	\$52,267
2047	13,954	37,252	435	2,722	\$148,773	\$74,311	\$138,211	\$54,227
2048	13,945	37,250	434	2,721	\$154,182	\$77,253	\$143,200	\$56,261
2049	13,904	37,232	434	2,721	\$159,890	\$80,162	\$148,433	\$58,374
2050	13,903	37,256	434	2,721	\$165,750	\$83,184	\$153,842	\$60,564
2051	13,913	37,259	434	2,722	\$171,796	\$86,303	\$159,476	\$62,838
2052	13,917	37,253	433	2,721	\$178,092	\$89,549	\$165,336	\$65,195
2053	13,921	37,240	433	2,721	\$184,644	\$92,921	\$171,421	\$67,637
2054	13,916	37,241	433	2,721	\$191,433	\$96,407	\$177,754	\$70,165
2055	13,906	37,215	433	2,721	\$198,430	\$99,989	\$184,352	\$72,785
2056	13,910	37,206	433	2,721	\$205,768	\$103,732	\$191,183	\$75,508
2057	13,921	37,200	433	2,721	\$213,444	\$107,616	\$198,388	\$78,336

\*This projection includes retired from active and reserve duty.

\*\*Future mortality improvement is assumed.

\*\*\*Gains during the year include those people who die before year end. All figures are after total and partial VA offsets.

\*\*\*\*The retiree gain jumps in FY 2013 and FY 2028 are a product of the modeling due to section 647 of the 2008 NDAA.

Please refer to Appendix F and Appendix H for more information.

# **RETIREE GAIN STATEMENT (continued)**

Fiscal Year	Gains During the Fiscal Year				Average Starting Net Retired Pay Before CPI Increase			
	Nondisabled		Disabled		Nondisabled		Disabled	
	Officers	Enlisted	Officers	Enlisted	Officers	Enlisted	Officers	Enlisted
2058	13,949	37,205	433	2,721	\$221,540	\$111,654	\$205,892	\$81,273
2059	13,960	37,201	434	2,721	\$229,827	\$115,833	\$213,704	\$84,319
2060	13,978	37,206	434	2,721	\$238,513	\$120,181	\$221,825	\$87,482
2061	13,995	37,208	434	2,721	\$247,565	\$124,687	\$230,295	\$90,764
2062	14,007	37,212	434	2,721	\$256,944	\$129,358	\$239,064	\$94,169
2063	14,021	37,221	435	2,721	\$266,717	\$134,205	\$248,139	\$97,702
2064	14,026	37,231	435	2,721	\$276,766	\$139,241	\$257,551	\$101,370
2065	14,029	37,232	435	2,721	\$287,281	\$144,462	\$267,307	\$105,174
2066	14,027	37,233	435	2,721	\$298,183	\$149,880	\$277,402	\$109,121
2067	14,023	37,236	435	2,721	\$309,462	\$155,503	\$287,875	\$113,216
2068	14,022	37,239	435	2,721	\$321,168	\$161,339	\$298,713	\$117,465
2069	14,016	37,240	435	2,721	\$333,252	\$167,394	\$309,945	\$121,873
2070	14,012	37,242	435	2,722	\$345,788	\$173,678	\$321,574	\$126,446
2071	14,009	37,244	435	2,722	\$358,778	\$180,196	\$333,620	\$131,191
2072	14,006	37,245	435	2,722	\$372,226	\$186,958	\$346,099	\$136,114
2073	14,002	37,246	435	2,722	\$386,180	\$193,975	\$359,021	\$141,221
2074	13,996	37,248	435	2,722	\$400,594	\$201,254	\$372,413	\$146,519
2075	13,990	37,247	435	2,722	\$415,558	\$208,802	\$386,300	\$152,015
2076	13,985	37,247	434	2,722	\$431,059	\$216,634	\$400,694	\$157,716
2077	13,981	37,247	434	2,722	\$447,140	\$224,760	\$415,642	\$163,636
2078	13,981	37,247	434	2,722	\$463,855	\$233,190	\$431,163	\$169,773
2079	13,979	37,247	434	2,722	\$481,169	\$241,936	\$447,280	\$176,140
2080	13,980	37,247	434	2,722	\$499,159	\$251,011	\$464,013	\$182,747
2081	13,982	37,247	434	2,722	\$517,831	\$260,426	\$481,395	\$189,601
2082	13,984	37,247	434	2,722	\$537,215	\$270,194	\$499,442	\$196,712
2083	13,986	37,248	434	2,722	\$557,344	\$280,327	\$518,174	\$204,090
2084	13,989	37,249	434	2,722	\$578,225	\$290,841	\$537,621	\$211,745
2085	13,991	37,249	434	2,722	\$599,910	\$301,749	\$557,809	\$219,687
2086	13,993	37,250	434	2,722	\$622,429	\$313,066	\$578,760	\$227,927
2087	13,995	37,250	435	2,722	\$645,804	\$324,808	\$600,511	\$236,476
2088	13,997	37,251	435	2,722	\$670,073	\$336,991	\$623,083	\$245,345
2089	13,998	37,251	435	2,722	\$695,246	\$349,630	\$646,506	\$254,548
2090	14,000	37,252	435	2,722	\$721,367	\$362,744	\$670,805	\$264,096
2091	14,001	37,253	435	2,722	\$748,475	\$376,350	\$696,014	\$274,001
2092	14,002	37,254	435	2,722	\$776,597	\$390,466	\$722,164	\$284,279
2093	14,002	37,254	435	2,722	\$805,776	\$405,112	\$749,283	\$294,942
2094	14,002	37,255	435	2,722	\$836,029	\$420,308	\$777,409	\$306,005
2095	14,002	37,255	435	2,722	\$867,413	\$436,073	\$806,580	\$317,482
2096	14,001	37,256	435	2,722	\$899,965	\$452,429	\$836,832	\$329,390
2097	14,000	37,256	435	2,722	\$933,724	\$469,398	\$868,209	\$341,745
2098	13,999	37,257	435	2,722	\$968,748	\$487,005	\$900,755	\$354,562
2099	13,998	37,257	435	2,722	\$1,005,070	\$505,271	\$934,517	\$367,861
2100	13,997	37,257	435	2,722	\$1,042,749	\$524,222	\$969,540	\$381,658
2101	13,997	37,258	435	2,722	\$1,081,835	\$543,884	\$1,005,873	\$395,972
2102	13,996	37,258	435	2,722	\$1,122,382	\$564,283	\$1,043,568	\$410,823
2103	13,996	37,258	435	2,722	\$1,164,448	\$585,447	\$1,082,675	\$426,232
2104	13,996	37,259	435	2,722	\$1,208,084	\$607,405	\$1,123,250	\$442,218
2105	13,996	37,259	435	2,722	\$1,253,359	\$630,186	\$1,165,350	\$458,803
2106	13,996	37,259	435	2,722	\$1,300,335	\$653,822	\$1,209,032	\$476,011

\*This projection includes retired from active and reserve duty.

\*\*Future mortality improvement is assumed.

\*\*\*Gains during the year include those people who die before year end. All figures are after total and partial VA offsets.

\*\*\*\*The retiree gain jumps in FY 2013 and FY 2028 are a product of the modeling due to section 647 of the 2008 NDAA.

Please refer to Appendix F and Appendix H for more information.

**TOTAL NUMBER OF SURVIVORS ON SEPTEMBER 30 OF EACH FISCAL YEAR**

<b>Fiscal Year</b>	<b>SBP</b>	<b>RCSBP</b>	<b>Minimum Income</b>	<b>Death on Active Duty</b>	<b>RSFPP</b>	<b>NDA 2008 Special Survivor Indemnity Allowance</b>	<b>Total</b>
2007	191,147	78,668	201	5,374	11,336	0	286,726
2008	194,896	82,187	176	5,528	10,635	0	293,423
2009	198,003	85,441	156	5,659	9,915	56,186	299,175
2010	200,537	88,464	139	5,777	9,203	56,542	304,120
2011	202,506	91,263	122	5,881	8,504	56,740	308,277
2012	203,921	93,857	108	5,970	7,822	56,801	311,678
2013	204,804	96,346	95	6,039	7,160	56,740	314,445
2014	205,199	98,637	84	6,096	6,521	56,612	316,536
2015	205,135	100,803	73	6,132	5,908	56,406	318,052
2016	204,674	102,883	64	6,145	5,327	56,063	319,094
2017	203,868	104,907	56	6,134	4,780	0	319,745
2018	202,767	106,906	49	6,093	4,269	0	320,085
2019	201,414	108,906	43	6,032	3,794	0	320,188
2020	199,843	110,927	37	5,949	3,357	0	320,113
2021	198,084	112,973	33	5,855	2,958	0	319,903
2022	196,163	115,047	28	5,753	2,596	0	319,588
2023	194,104	117,140	25	5,659	2,270	0	319,198
2024	191,933	119,242	21	5,576	1,979	0	318,752
2025	189,676	121,338	18	5,505	1,721	0	318,258
2026	187,355	123,410	16	5,448	1,493	0	317,723
2027	185,002	125,443	14	5,404	1,295	0	317,158
2028	182,647	127,516	12	5,375	1,123	0	316,673
2029	180,318	129,455	10	5,353	974	0	316,110
2030	178,045	131,300	9	5,340	848	0	315,541
2031	175,851	133,034	7	5,330	741	0	314,963
2032	173,761	134,641	6	5,321	651	0	314,380
2033	171,786	136,104	5	5,313	576	0	313,784
2034	169,936	137,406	4	5,306	513	0	313,166
2035	168,213	138,533	4	5,300	461	0	312,510
2036	166,611	139,463	3	5,294	418	0	311,789
2037	165,117	140,184	3	5,290	381	0	310,975
2038	163,712	140,681	2	5,285	351	0	310,031
2039	162,376	140,952	2	5,279	325	0	308,934
2040	161,085	141,001	2	5,272	303	0	307,663
2041	159,821	140,847	1	5,264	283	0	306,216
2042	158,561	140,511	1	5,255	266	0	304,594
2043	157,286	140,030	1	5,245	251	0	302,814
2044	155,984	139,437	1	5,236	237	0	300,894
2045	154,642	138,767	1	5,227	224	0	298,861
2046	153,263	138,067	1	5,217	211	0	296,759
2047	151,839	137,364	0	5,205	199	0	294,608
2048	150,364	136,684	0	5,192	188	0	292,429
2049	148,836	136,047	0	5,178	177	0	290,239
2050	147,252	135,463	0	5,163	167	0	288,046
2051	145,618	134,945	0	5,147	157	0	285,867
2052	143,930	134,493	0	5,131	147	0	283,702
2053	142,193	134,105	0	5,115	138	0	281,552
2054	140,412	133,776	0	5,099	130	0	279,417
2055	138,594	133,497	0	5,080	122	0	277,294
2056	136,751	133,266	0	5,061	114	0	275,192

\*This projection includes retired from active and reserve duty.

\*\*Future mortality improvement is assumed.

\*\*\*The number of survivors projected only considers those receiving non-zero pay from the Military Retirement Fund.

\*\*\*\*RCSBP survivors include all survivors of reservists, not just those electing pre-age 60 coverage.

\*\*\*\*\*The above counts do not include a small number of survivors projected to move from zero to non-zero pay as a result of NDAA 2005.

\*\*\*\*\*The NDAA 2008 Special Survivor Indemnity Allowance counts are shown for informational purposes and are not included in the Total column.

**TOTAL NUMBER OF SURVIVORS ON SEPTEMBER 30 OF EACH FISCAL YEAR (continued)**

<b>Fiscal Year</b>	<b>SBP</b>	<b>RCSBP</b>	<b>Minimum Income</b>	<b>Death on Active Duty</b>	<b>RSFPP</b>	<b>NDAA 2008 Special Survivor Indemnity Allowance</b>	<b>Total</b>
2057	134,899	133,078	0	5,040	107	0	273,124
2058	133,052	132,928	0	5,018	101	0	271,099
2059	131,227	132,817	0	4,996	95	0	269,135
2060	129,441	132,734	0	4,974	89	0	267,239
2061	127,716	132,687	0	4,951	84	0	265,438
2062	126,070	132,680	0	4,929	80	0	263,758
2063	124,522	132,710	0	4,907	75	0	262,214
2064	123,088	132,778	0	4,887	71	0	260,825
2065	121,780	132,886	0	4,867	68	0	259,602
2066	120,606	133,034	0	4,847	65	0	258,551
2067	119,573	133,217	0	4,826	61	0	257,677
2068	118,682	133,435	0	4,805	59	0	256,981
2069	117,933	133,681	0	4,785	56	0	256,455
2070	117,321	133,946	0	4,764	53	0	256,084
2071	116,838	134,224	0	4,744	51	0	255,857
2072	116,476	134,509	0	4,724	49	0	255,757
2073	116,223	134,793	0	4,705	46	0	255,767
2074	116,069	135,070	0	4,687	44	0	255,870
2075	116,002	135,335	0	4,671	42	0	256,049
2076	116,008	135,587	0	4,655	40	0	256,289
2077	116,079	135,821	0	4,641	37	0	256,579
2078	116,203	136,040	0	4,628	35	0	256,906
2079	116,372	136,243	0	4,617	33	0	257,264
2080	116,577	136,429	0	4,607	31	0	257,643
2081	116,811	136,606	0	4,597	28	0	258,042
2082	117,069	136,773	0	4,590	26	0	258,458
2083	117,342	136,926	0	4,584	24	0	258,876
2084	117,624	137,078	0	4,579	21	0	259,303
2085	117,910	137,226	0	4,577	19	0	259,732
2086	118,194	137,368	0	4,573	17	0	260,153
2087	118,474	137,508	0	4,570	15	0	260,568
2088	118,747	137,645	0	4,568	14	0	260,974
2089	119,010	137,782	0	4,567	12	0	261,370
2090	119,262	137,917	0	4,566	10	0	261,755
2091	119,503	138,051	0	4,565	9	0	262,128
2092	119,734	138,184	0	4,563	8	0	262,489
2093	119,956	138,317	0	4,560	7	0	262,839
2094	120,169	138,449	0	4,557	6	0	263,181
2095	120,375	138,583	0	4,554	5	0	263,518
2096	120,576	138,718	0	4,551	4	0	263,848
2097	120,772	138,855	0	4,546	3	0	264,176
2098	120,965	138,992	0	4,541	3	0	264,500
2099	121,157	139,130	0	4,536	2	0	264,825
2100	121,349	139,269	0	4,529	2	0	265,149
2101	121,540	139,409	0	4,522	1	0	265,472
2102	121,730	139,549	0	4,515	1	0	265,795
2103	121,920	139,689	0	4,507	1	0	266,117
2104	122,109	139,830	0	4,499	1	0	266,439
2105	122,298	139,971	0	4,490	1	0	266,760
2106	122,488	140,112	0	4,482	0	0	267,081

\*This projection includes retired from active and reserve duty.

\*\*Future mortality improvement is assumed.

\*\*\*The number of survivors projected only considers those receiving non-zero pay from the Military Retirement Fund.

\*\*\*\*RCSBP survivors include all survivors of reservists, not just those electing pre-age 60 coverage.

\*\*\*\*\*The above counts do not include a small number of survivors projected to move from zero to non-zero pay as a result of NDAA 2005.

\*\*\*\*\*The NDAA 2008 Special Survivor Indemnity Allowance counts are shown for informational purposes and are not included in the Total column.

# TOTAL ANNUAL SURVIVOR BENEFITS FOR EACH FISCAL YEAR

(Dollar Amounts in Thousands)

Fiscal Year	SBP	RCSBP	Minimum Income	Death on Active Duty	RSEFP	NDA 2008 Special Survivor Indemnity Allowance	Total
2008	\$2,544,769	\$608,604	\$1,236	\$45,357	\$31,394	\$0	\$3,231,360
2009	\$2,825,336	\$646,842	\$1,120	\$49,466	\$29,584	\$33,711	\$3,586,059
2010	\$2,941,661	\$678,483	\$1,020	\$53,206	\$27,708	\$40,710	\$3,742,788
2011	\$3,039,272	\$706,388	\$922	\$56,813	\$25,814	\$47,661	\$3,876,871
2012	\$3,132,767	\$734,157	\$833	\$60,577	\$23,947	\$54,529	\$4,006,809
2013	\$3,220,220	\$761,810	\$753	\$64,398	\$22,114	\$61,279	\$4,130,574
2014	\$3,300,968	\$789,415	\$679	\$68,258	\$20,324	\$67,934	\$4,247,578
2015	\$3,375,142	\$817,090	\$610	\$72,120	\$18,587	\$67,687	\$4,351,236
2016	\$3,443,065	\$845,381	\$549	\$75,855	\$16,918	\$28,031	\$4,409,799
2017	\$3,523,730	\$879,191	\$495	\$79,817	\$15,348	\$0	\$4,498,581
2018	\$3,606,377	\$916,376	\$447	\$83,656	\$13,876	\$0	\$4,620,732
2019	\$3,685,826	\$956,083	\$403	\$87,160	\$12,502	\$0	\$4,741,974
2020	\$3,762,750	\$998,772	\$363	\$90,384	\$11,216	\$0	\$4,863,485
2021	\$3,837,627	\$1,044,846	\$326	\$93,236	\$10,032	\$0	\$4,986,067
2022	\$3,910,933	\$1,094,683	\$293	\$95,805	\$8,952	\$0	\$5,110,666
2023	\$3,983,065	\$1,148,463	\$263	\$98,102	\$7,970	\$0	\$5,237,863
2024	\$4,054,427	\$1,206,376	\$236	\$100,390	\$7,082	\$0	\$5,368,511
2025	\$4,125,513	\$1,268,530	\$211	\$102,753	\$6,290	\$0	\$5,503,297
2026	\$4,196,732	\$1,334,875	\$188	\$105,215	\$5,594	\$0	\$5,642,604
2027	\$4,268,349	\$1,405,384	\$167	\$107,826	\$4,983	\$0	\$5,786,709
2028	\$4,340,949	\$1,480,513	\$148	\$110,658	\$4,453	\$0	\$5,936,721
2029	\$4,416,139	\$1,559,912	\$131	\$113,762	\$3,998	\$0	\$6,093,942
2030	\$4,493,939	\$1,643,006	\$115	\$117,052	\$3,609	\$0	\$6,257,721
2031	\$4,575,545	\$1,729,925	\$100	\$120,483	\$3,281	\$0	\$6,429,334
2032	\$4,661,829	\$1,820,465	\$87	\$124,104	\$3,006	\$0	\$6,609,491
2033	\$4,753,774	\$1,914,373	\$76	\$127,897	\$2,778	\$0	\$6,798,898
2034	\$4,852,021	\$2,011,296	\$66	\$131,884	\$2,592	\$0	\$6,997,859
2035	\$4,957,263	\$2,110,808	\$58	\$136,068	\$2,439	\$0	\$7,206,636
2036	\$5,069,769	\$2,212,353	\$50	\$140,446	\$2,314	\$0	\$7,424,932
2037	\$5,189,527	\$2,315,311	\$43	\$145,025	\$2,212	\$0	\$7,652,118
2038	\$5,316,519	\$2,419,038	\$37	\$149,750	\$2,128	\$0	\$7,887,472
2039	\$5,450,350	\$2,522,886	\$32	\$154,617	\$2,058	\$0	\$8,129,943
2040	\$5,590,844	\$2,626,336	\$28	\$159,624	\$1,998	\$0	\$8,378,830
2041	\$5,737,665	\$2,729,233	\$24	\$164,778	\$1,946	\$0	\$8,633,646
2042	\$5,890,335	\$2,831,365	\$21	\$170,083	\$1,898	\$0	\$8,893,702
2043	\$6,048,269	\$2,932,634	\$18	\$175,553	\$1,854	\$0	\$9,158,328
2044	\$6,211,325	\$3,033,523	\$15	\$181,187	\$1,810	\$0	\$9,427,860
2045	\$6,379,368	\$3,134,485	\$13	\$187,019	\$1,765	\$0	\$9,702,650
2046	\$6,552,361	\$3,236,148	\$12	\$192,997	\$1,719	\$0	\$9,983,237
2047	\$6,730,603	\$3,339,300	\$10	\$199,168	\$1,670	\$0	\$10,270,751
2048	\$6,913,974	\$3,444,522	\$9	\$205,548	\$1,619	\$0	\$10,565,672
2049	\$7,102,380	\$3,552,414	\$8	\$212,126	\$1,567	\$0	\$10,868,495
2050	\$7,295,677	\$3,663,304	\$7	\$218,927	\$1,512	\$0	\$11,179,427
2051	\$7,493,726	\$3,777,908	\$7	\$225,945	\$1,456	\$0	\$11,499,042
2052	\$7,695,966	\$3,896,311	\$6	\$233,219	\$1,399	\$0	\$11,826,901
2053	\$7,901,711	\$4,018,707	\$6	\$240,726	\$1,341	\$0	\$12,162,491
2054	\$8,110,616	\$4,145,605	\$6	\$248,464	\$1,283	\$0	\$12,505,974
2055	\$8,322,309	\$4,277,493	\$6	\$256,443	\$1,227	\$0	\$12,857,478
2056	\$8,536,676	\$4,414,712	\$5	\$264,693	\$1,173	\$0	\$13,217,259
2057	\$8,753,807	\$4,557,904	\$5	\$273,230	\$1,120	\$0	\$13,586,066

\*This projection includes retired from active and reserve duty.

\*\*Future mortality improvement is assumed.

\*\*\*RCSBP survivors include all survivors of reservists, not just those electing pre-age 60 coverage.

\*\*\*\*This projection is adjusted for the increase in survivor benefits due to NDA 2005.

\*\*\*\*\*The NDA 2008 Special Survivor Indemnity Allowance dollars are included in the Total column.

**TOTAL ANNUAL SURVIVOR BENEFITS FOR EACH FISCAL YEAR (continued)**

(Dollar Amounts in Thousands)

<b>Fiscal Year</b>	<b>SBP</b>	<b>RCSBP</b>	<b>Minimum Income</b>	<b>Death on Active Duty</b>	<b>RSFPP</b>	<b>NDAA 2008 Special Survivor Indemnity Allowance</b>	<b>Total</b>
2058	\$8,973,720	\$4,707,845	\$5	\$282,076	\$1,071	\$0	\$13,964,717
2059	\$9,196,835	\$4,864,881	\$5	\$291,227	\$1,024	\$0	\$14,353,972
2060	\$9,423,905	\$5,030,060	\$5	\$300,709	\$981	\$0	\$14,755,660
2061	\$9,656,022	\$5,204,131	\$5	\$310,526	\$942	\$0	\$15,171,626
2062	\$9,894,873	\$5,388,055	\$5	\$320,701	\$907	\$0	\$15,604,541
2063	\$10,142,389	\$5,582,745	\$5	\$331,254	\$874	\$0	\$16,057,267
2064	\$10,400,498	\$5,789,090	\$5	\$342,197	\$845	\$0	\$16,532,635
2065	\$10,671,321	\$6,007,807	\$5	\$353,513	\$819	\$0	\$17,033,465
2066	\$10,956,913	\$6,239,528	\$5	\$365,210	\$797	\$0	\$17,562,453
2067	\$11,259,457	\$6,485,042	\$5	\$377,342	\$778	\$0	\$18,122,624
2068	\$11,580,876	\$6,744,836	\$5	\$389,921	\$759	\$0	\$18,716,397
2069	\$11,923,148	\$7,019,275	\$4	\$402,976	\$743	\$0	\$19,346,146
2070	\$12,288,176	\$7,308,430	\$4	\$416,487	\$729	\$0	\$20,013,826
2071	\$12,677,272	\$7,612,940	\$4	\$430,493	\$716	\$0	\$20,721,425
2072	\$13,092,466	\$7,932,810	\$4	\$445,008	\$704	\$0	\$21,470,992
2073	\$13,534,598	\$8,267,977	\$3	\$460,075	\$692	\$0	\$22,263,345
2074	\$14,004,422	\$8,618,955	\$3	\$475,710	\$679	\$0	\$23,099,769
2075	\$14,502,413	\$8,985,139	\$3	\$491,893	\$666	\$0	\$23,980,114
2076	\$15,028,716	\$9,367,118	\$2	\$508,604	\$650	\$0	\$24,905,090
2077	\$15,583,611	\$9,765,183	\$2	\$525,992	\$634	\$0	\$25,875,422
2078	\$16,167,320	\$10,179,333	\$2	\$543,952	\$616	\$0	\$26,891,223
2079	\$16,779,997	\$10,610,054	\$2	\$562,560	\$596	\$0	\$27,953,209
2080	\$17,421,852	\$11,057,451	\$1	\$581,826	\$572	\$0	\$29,061,702
2081	\$18,093,772	\$11,521,873	\$1	\$601,686	\$547	\$0	\$30,217,879
2082	\$18,795,718	\$12,003,808	\$1	\$622,506	\$520	\$0	\$31,422,553
2083	\$19,527,826	\$12,503,184	\$1	\$643,939	\$491	\$0	\$32,675,441
2084	\$20,290,310	\$13,020,524	\$1	\$666,275	\$461	\$0	\$33,977,571
2085	\$21,083,471	\$13,556,278	\$1	\$689,517	\$430	\$0	\$35,329,697
2086	\$21,907,683	\$14,110,613	\$0	\$713,483	\$399	\$0	\$36,732,178
2087	\$22,763,511	\$14,684,224	\$0	\$738,387	\$368	\$0	\$38,186,490
2088	\$23,651,615	\$15,277,816	\$0	\$764,332	\$336	\$0	\$39,694,099
2089	\$24,573,003	\$15,892,107	\$0	\$791,194	\$305	\$0	\$41,256,609
2090	\$25,528,756	\$16,527,914	\$0	\$819,118	\$275	\$0	\$42,876,063
2091	\$26,520,254	\$17,186,085	\$0	\$848,025	\$245	\$0	\$44,554,609
2092	\$27,549,163	\$17,867,555	\$0	\$877,956	\$218	\$0	\$46,294,892
2093	\$28,617,129	\$18,573,267	\$0	\$909,015	\$192	\$0	\$48,099,603
2094	\$29,725,997	\$19,304,276	\$0	\$941,403	\$168	\$0	\$49,971,844
2095	\$30,877,648	\$20,061,841	\$0	\$974,829	\$146	\$0	\$51,914,464
2096	\$32,073,982	\$20,847,081	\$0	\$1,009,504	\$125	\$0	\$53,930,692
2097	\$33,317,076	\$21,661,219	\$0	\$1,045,467	\$106	\$0	\$56,023,868
2098	\$34,609,219	\$22,505,519	\$0	\$1,082,760	\$89	\$0	\$58,197,587
2099	\$35,952,805	\$23,381,248	\$0	\$1,121,509	\$75	\$0	\$60,455,637
2100	\$37,350,168	\$24,289,786	\$0	\$1,161,522	\$62	\$0	\$62,801,538
2101	\$38,803,550	\$25,232,501	\$0	\$1,203,061	\$51	\$0	\$65,239,163
2102	\$40,315,046	\$26,210,773	\$0	\$1,246,110	\$41	\$0	\$67,771,970
2103	\$41,886,938	\$27,226,176	\$0	\$1,290,720	\$33	\$0	\$70,403,867
2104	\$43,521,465	\$28,280,196	\$0	\$1,336,943	\$27	\$0	\$73,138,631
2105	\$45,220,982	\$29,374,425	\$0	\$1,384,836	\$21	\$0	\$75,980,264
2106	\$46,987,962	\$30,510,515	\$0	\$1,434,455	\$16	\$0	\$78,932,948

\*This projection includes retired from active and reserve duty.

\*\*Future mortality improvement is assumed.

\*\*\*RCSBP survivors include all survivors of reservists, not just those electing pre-age 60 coverage.

\*\*\*\*This projection is adjusted for the increase in survivor benefits due to NDAA 2005.

\*\*\*\*\*The NDAA 2008 Special Survivor Indemnity Allowance dollars are included in the Total column.

# **TOTAL PROJECTED BASIC PAY AND RETIRED OUTLAYS**

(Dollar Amounts in Thousands)

<u>Fiscal Year</u>	<u>Total Projected Basic Pay</u>	<u>Total Projected Outlays</u>	<u>Retired Outlays Over Basic Pay</u>
2008	\$54,523,663	\$46,585,008	85.4%
2009	\$56,139,628	\$48,636,767	86.6%
2010	\$58,054,962	\$50,425,648	86.9%
2011	\$60,237,132	\$51,881,626	86.1%
2012	\$62,495,507	\$53,324,318	85.3%
2013	\$64,759,663	\$54,951,207	84.9%
2014	\$67,112,610	\$56,571,509	84.3%
2015	\$69,586,665	\$58,049,774	83.4%
2016	\$72,164,713	\$59,528,097	82.5%
2017	\$74,818,553	\$61,383,959	82.0%
2018	\$77,432,888	\$63,436,656	81.9%
2019	\$80,132,626	\$65,567,582	81.8%
2020	\$82,923,843	\$67,777,070	81.7%
2021	\$85,822,994	\$70,053,591	81.6%
2022	\$88,824,209	\$72,399,189	81.5%
2023	\$91,893,684	\$74,845,718	81.4%
2024	\$95,038,615	\$77,363,617	81.4%
2025	\$98,393,901	\$79,862,007	81.2%
2026	\$102,000,681	\$82,344,112	80.7%
2027	\$105,785,013	\$84,869,550	80.2%
2028	\$109,701,932	\$87,781,839	80.0%
2029	\$113,772,912	\$90,766,782	79.8%
2030	\$118,020,447	\$93,698,731	79.4%
2031	\$122,401,380	\$96,733,933	79.0%
2032	\$126,949,256	\$99,874,984	78.7%
2033	\$131,688,079	\$103,136,421	78.3%
2034	\$136,616,609	\$106,504,845	78.0%
2035	\$141,752,420	\$109,970,348	77.6%
2036	\$147,098,031	\$113,553,013	77.2%
2037	\$152,635,003	\$117,277,145	76.8%
2038	\$158,356,968	\$121,150,831	76.5%
2039	\$164,279,277	\$125,169,094	76.2%
2040	\$170,420,788	\$129,339,831	75.9%
2041	\$176,782,824	\$133,673,869	75.6%
2042	\$183,381,511	\$138,178,938	75.4%
2043	\$190,222,618	\$142,863,905	75.1%
2044	\$197,314,174	\$147,736,573	74.9%
2045	\$204,679,545	\$152,804,303	74.7%
2046	\$212,332,823	\$158,074,913	74.4%
2047	\$220,285,643	\$163,554,638	74.2%
2048	\$228,543,515	\$169,239,625	74.1%
2049	\$237,115,739	\$175,133,888	73.9%
2050	\$246,015,010	\$181,263,956	73.7%
2051	\$255,246,351	\$187,660,283	73.5%
2052	\$264,823,545	\$194,332,248	73.4%
2053	\$274,762,790	\$201,290,298	73.3%
2054	\$285,078,464	\$208,542,153	73.2%
2055	\$295,787,824	\$216,098,086	73.1%
2056	\$306,906,037	\$223,973,349	73.0%
2057	\$318,442,630	\$232,190,790	72.9%

\*Basic pay includes reserve and active duty basic pay; outlays include retired pay and survivor benefits.

\*\*This projection includes retired from active and reserve duty.

\*\*\*Future mortality improvement is assumed.

\*\*\*\*This projection includes pay for those retirees eligible for Concurrent Receipt.

\*\*\*\*\*This projection is adjusted for the increase in survivor benefits due to Public Law 108-375 and Public Law 110-181.

\*\*\*\*\*Total Projected Outlays do not include an estimated \$57 million CRSC pay as of 9/30/2007 due to Section 641 of NDAA 2008.

However, it is accounted for in the actuarial accrued liability.



**TOTAL PROJECTED BASIC PAY AND RETIRED OUTLAYS (continued)**

(Dollar Amounts in Thousands)

<u>Fiscal Year</u>	<u>Total Projected Basic Pay</u>	<u>Total Projected Outlays</u>	<u>Retired Outlays Over Basic Pay</u>
2058	\$330,407,554	\$240,772,704	72.9%
2059	\$342,816,018	\$249,735,151	72.8%
2060	\$355,687,560	\$259,098,823	72.8%
2061	\$369,036,843	\$268,873,215	72.9%
2062	\$382,882,067	\$279,079,882	72.9%
2063	\$397,241,721	\$289,739,321	72.9%
2064	\$412,134,799	\$300,866,858	73.0%
2065	\$427,583,828	\$312,478,356	73.1%
2066	\$443,610,739	\$324,583,470	73.2%
2067	\$460,238,177	\$337,197,994	73.3%
2068	\$477,488,266	\$350,337,352	73.4%
2069	\$495,384,727	\$364,014,949	73.5%
2070	\$513,953,308	\$378,245,803	73.6%
2071	\$533,218,159	\$393,047,823	73.7%
2072	\$553,205,527	\$408,437,209	73.8%
2073	\$573,943,446	\$424,432,045	74.0%
2074	\$595,461,052	\$441,052,593	74.1%
2075	\$617,789,152	\$458,318,357	74.2%
2076	\$640,958,702	\$476,251,733	74.3%
2077	\$665,000,759	\$494,876,968	74.4%
2078	\$689,946,407	\$514,219,328	74.5%
2079	\$715,828,724	\$534,302,450	74.6%
2080	\$742,683,231	\$555,150,328	74.7%
2081	\$770,545,374	\$576,788,963	74.9%
2082	\$799,452,309	\$599,243,259	75.0%
2083	\$829,442,803	\$622,543,033	75.1%
2084	\$860,557,059	\$646,721,422	75.2%
2085	\$892,837,290	\$671,813,916	75.2%
2086	\$926,327,020	\$697,858,165	75.3%
2087	\$961,071,406	\$724,894,046	75.4%
2088	\$997,117,145	\$752,962,434	75.5%
2089	\$1,034,512,909	\$782,105,032	75.6%
2090	\$1,073,309,730	\$812,364,447	75.7%
2091	\$1,113,559,967	\$843,785,530	75.8%
2092	\$1,155,318,037	\$876,414,794	75.9%
2093	\$1,198,640,722	\$910,299,484	75.9%
2094	\$1,243,587,162	\$945,488,613	76.0%
2095	\$1,290,219,014	\$982,032,495	76.1%
2096	\$1,338,600,003	\$1,019,983,692	76.2%
2097	\$1,388,796,103	\$1,059,397,064	76.3%
2098	\$1,440,875,380	\$1,100,328,734	76.4%
2099	\$1,494,908,460	\$1,142,836,098	76.4%
2100	\$1,550,968,960	\$1,186,978,862	76.5%
2101	\$1,609,132,911	\$1,232,820,068	76.6%
2102	\$1,669,479,143	\$1,280,424,681	76.7%
2103	\$1,732,089,460	\$1,329,860,324	76.8%
2104	\$1,797,048,710	\$1,381,196,751	76.9%
2105	\$1,864,444,984	\$1,434,506,700	76.9%
2106	\$1,934,369,535	\$1,489,866,096	77.0%

\*Basic pay includes reserve and active duty basic pay; outlays include retired pay and survivor benefits.

\*\*This projection includes retired from active and reserve duty.

\*\*\*Future mortality improvement is assumed.

\*\*\*\*This projection includes pay for those retirees eligible for Concurrent Receipt.

\*\*\*\*\*This projection is adjusted for the increase in survivor benefits due to Public Law 108-375 and Public Law 110-181.

\*\*\*\*\*Total Projected Outlays do not include an estimated \$57 million CRSC pay as of 9/30/2007 due to Section 641 of NDAA 2008.

However, it is accounted for in the actuarial accrued liability.



## APPENDIX L

### MARKET VALUE OF ASSETS

	<u>Page</u>
Statement of Net Assets Available for Benefits .....	L-2

## **STATEMENT OF NET ASSETS AVAILABLE FOR BENEFITS**

Under generally accepted accounting principles (GAAP) (Financial Accounting Standards Board (FASB) 35), private sector pension plans are required to include a table showing the “Net Assets Available for Benefits” and a “Statement of Changes in Net Assets Available for Benefits,” where assets are valued at fair market value in their accounting statements. For the Military Retirement Fund, fair market value is based on the bid prices of public issue securities with the same maturity dates and coupon rates as the special issue securities held by the Fund. These statements are included in Tables L-1 and L-2.

Measures of a retirement system’s liabilities (required for private sector plans under GAAP) are the “Accumulated Plan Benefits” and the “Market Value of Assets.” In prior years, both these items and explanatory notes were included in this appendix. Starting in FY07, only the “Market Value of Assets” will be shown for informational purposes.

TABLE L-1

DEPARTMENT OF DEFENSE  
MILITARY RETIREMENT FUND  
STATEMENT OF NET ASSETS AVAILABLE FOR BENEFITS  
(\$ in thousands)

For the Plan Year Ended  
September 30, 2007

Assets

1) Investments, at fair market value, in U.S. Government securities: <sup>1</sup>	\$ 212,242,566
2) Accounts receivable:	
a) Accrued interest <sup>2</sup>	2,720,698
b) Due from military retirees or their survivors	24,166
c) Intragovernmental	118,950
3) Cash:	20,376
<u>Total Assets (1 + 2 + 3):</u>	<u>\$ 215,126,756</u>
Accounts payable:	<u>\$ (3,530,393)</u>
<u>Total Assets Available for Benefits</u>	<u><u>\$ 211,596,363</u></u>

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<sup>1</sup> Fair market value of securities has been measured by quoted prices (bid price) in the active U.S. Government securities market. Bid price used represents the over-the-counter quotations as of 4 p.m. eastern time as reported by the U.S. Department of Treasury – Bureau of Public Debt on September 28, 2007.

<sup>2</sup> Includes accrued interest receivable and interest purchased.

TABLE L-2

DEPARTMENT OF DEFENSE  
MILITARY RETIREMENT FUND  
STATEMENT OF CHANGES IN NET ASSETS  
AVAILABLE FOR BENEFITS  
(\$ in thousands)

For the Plan Year Ended  
September 30, 2007

Net assets available for benefits at beginning of plan year:	\$ 202,554,082
1) Investment income (coupons received)	11,782,263
2) Net appreciation in fair market value of investments	(2,093,591)
3) Contributions from services	14,483,714
4) Appropriation to amortize the initial unfunded liability	26,048,000
5) Appropriation for Treasury Normal Cost Contribution	2,452,000
Total additions (1 + 2 + 3 + 4 + 5)	<u>\$ 52,672,386</u>
Less: Benefits paid to participants <sup>1</sup>	<u>\$ 43,630,105</u>
Net assets available for benefits at end of plan year	<u>\$ 211,596,363</u>

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<sup>1</sup> The statement has been revised to show benefits paid to participants on an accrual basis:

Benefits paid on cash basis	\$ 43,508,802
Increase in liability for benefits due at end of year	<u>121,303</u>
Benefits paid on accrual basis	\$ 43,630,105

## APPENDIX M

### SUMMARY OF CHANGES FOR THE SEPTEMBER 30, 2008, VALUATION

	<u>Page</u>
Summary of Changes for the September 30, 2008, Valuation .....	M-2

## SUMMARY OF CHANGES FOR THE SEPTEMBER 30, 2008, VALUATION

### CHANGES IN ACTUARIAL ASSUMPTIONS

At its August 2008 meeting, the DoD Board of Actuaries approved the following changes for the September 30, 2008, valuation, which will be documented in a future report. All actuarial gains/losses in this appendix are based on 2007 data.

#### *Interest Rate*

The new interest rate of 5.75% (from 6%) increases the full-time normal cost percentage (NCP) (for DoD) by 2.3 percentage-points, and the part-time DoD NCP by 2.0 percentage-points. We estimate the change leads to a \$40.7 billion actuarial loss to the Fund.

#### *Nondisabled Retiree Death and Nondeath Loss Rates*

The Board approved the division of rates into those who retired from active duty and those who retired from the reserves, which results in a better allocation of active and reserve costs. The rates lower the full-time DoD NCP by less than 0.1 percentage point, and increase the part-time DoD NCP by 0.9 percentage points. We estimate the rates lead to an actuarial loss of \$0.07 billion.

#### *Mortality Improvement Factors*

The new factors are based on the Society of Actuaries' Scale AA trend, with adjustments. They raise both full- and part-time DoD NCPs by 0.5 percentage points. We estimate the factors lead to an actuarial loss of \$12.7 billion.

#### *Programming Refinement*

There was an enhancement to the modeling of the Survivor Benefit Plan. The refinement had no impact on the full- and part-time NCPs. We estimate the refinement results in a \$1.4 billion loss.



## APPENDIX N

### TREASURY PAYMENTS

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# **METHOD OF AMORTIZING CHANGES IN THE UNFUNDED LIABILITY OF THE MILITARY RETIREMENT SYSTEM**

## **Introduction**

Section 1465 of Title 10 states that the Secretary of Defense shall determine amortization methods and schedules for the annual amortization of changes in the unfunded liability (UFL) of the military retirement system. The section also states that these methods and assumptions must be approved by the DoD Board of Actuaries. The resulting payments are made by the Department of the Treasury to the Military Retirement Fund and do not affect the DoD budget.

There are three causes of change in the military retirement system's unfunded liability: (1) changes in benefits, (2) annual experience gains or losses resulting from actual experience deviating from expected experience, and (3) changes in actuarial assumptions used in the projected liability calculations. When a change in the unfunded liability does not fit perfectly into one of the three categories, the Board of Actuaries will determine the most appropriate one. The following describes the technical procedure of amortizing these types of changes, as approved by the Board.

## **Amortization Procedure**

All three types of changes in the UFL are amortized by means of payment schedules so that: (1) the annual amortization payments increase each year by the long-term basic pay scale assumption (currently 3.75 percent), (2) the payment stream completely liquidates the additional liability over 30 years, and (3) the payments are expressed to the nearest million dollars. The amortization payments increase at approximately the same rate as the increase in the total basic payroll for a particular year—an outcome that is consistent with the way the normal cost payments and payments to amortize the system's initial UFL are determined.

Experience gains and losses, which create changes in the UFL, occur every year. Because these changes are usually small in relative terms, the payment streams to amortize them are combined. This produces one single payment stream for the category of experience gains and losses and eliminates the tedious tracking of up to thirty different small amortization schedules. The DoD Office of the Actuary can identify the separate segments if the need arises.

A similar method of combining amortization schedules is used for changes in the UFL caused by changes in actuarial assumptions. Beginning with the September 30, 1995, valuation, changes to the UFL due to all benefit changes are being combined and amortized in a single stream of payments. Detailed examples of how the amortization payments are calculated follow.

Actuarial gains and losses are changes in the UFL that result from actual experience in a pension plan deviating from what was expected. An actuarial gain is a *decrease* in the UFL and is therefore expressed as a negative number. Correspondingly, a loss represents an *increase* in the UFL and is expressed as a positive number. To avoid confusion, the terms negative and positive "experience changes" will be used in place of "experience gains" and "experience losses."

The amortization payment for a negative experience change (gain) is also expressed as a negative number. These negative amortization payments reduce any positive amortization payments otherwise payable, including the (positive) payments amortizing the system's initial UFL.

Amortization payments for changes in the UFL are structured to increase each year with the basic pay scale increase. When the payments are negative, their absolute values are made to increase. Although this means that the payments are actually decreasing mathematically, for simplicity of expression both positive and negative amortization payments are said to "increase" by the basic pay scale increase.

### **Benefit and Experience Changes**

Below is an example of how three years' changes in UFL due to actual experience differing from expected experience would be amortized. The amortization schedules would be identical if these changes in the UFL had been due to changes in benefits. This example is hypothetical.

In FY07 there is an assumed experience change of -\$13,800 million (representing a gain of \$13,800 million) determined as of the end of the fiscal year, or September 30, 2007. Since this is the first experience change in the example, it does not need to be combined with a schedule for a prior year. It is amortized with 30 annual payments that increase each year at the rate of the assumed annual increase in basic pay. The payment stream commences on October 1, 2008, and the last payment is made on October 1, 2037. The final payment reduces the amortization base to zero.

The amount of the first payment, -\$654 million, is determined by means of the following steps:

1. Bring forward unamortized balance with interest to September 30, 2008:

$$-\$13,800 \text{ million} \times (1 + i) = -\$14,628 \text{ million}$$

2. Calculate annuity due factor for 30 years at interest rate  $j = [(1 + i) \div (1 + s)] - 1$ :

$$= 22.360236$$

3. Divide unamortized balance by annuity factor to get annual payment:

$$-\$14,628 \text{ million} \div 22.360236 = -\$654 \text{ million}$$

where the annual increase in the basic pay scale  $s = .0375$  and the valuation rate of interest  $i = .06$ . The amortization period is 30 years. In general, the amortization interest rate,  $j$ , is defined by

$$j = [(1 + i) \div (1 + s)] - 1.$$

A hypothetical experience loss in FY08 creates a change in the UFL of +\$8,400 million, calculated as of the end of that fiscal year, or September 30, 2008. The amortization schedules for this change and for the FY07 change are combined as follows. First, the unamortized balance of the FY07 experience change is determined. After the -\$654 million amortization payment is made on October 1, 2008, the remaining unamortized balance is -\$13,974 million. This balance is calculated as  $[-13,974 = (-13,800 \times 1.06) - (-654)]$ . The +\$8,400 million experience change for FY08 is then added to the -\$13,974 unamortized balance, leaving a combined balance of -\$5,574 million  $(-5,574 = -13,974 + 8,400)$ .

This combined balance will be amortized over a “combined amortization period.” The combined amortization period is equal to the weighted average of the remaining 29-year amortization period for the FY07 experience change and a new 30-year period for the FY08 experience change. The weights used in the calculation are the absolute values of the -\$13,974 million unamortized balance and the +\$8,400 million experience change, respectively.

Thus the combined amortization period is equal to:

$$\frac{(13,974 \times 29) + (8,400 \times 30)}{13,974 + 8,400} = 29.38 \text{ years}$$

An initial combined amortization payment of -\$268 million is determined by the following procedure:

1. Bring forward unamortized balance with interest to September 30, 2009:

$$-\$5,574 \text{ million} \times (1 + i) = -\$5,908 \text{ million}$$

2. Calculate annuity due factor for 29.38 years at interest rate  $j = [(1 + i) \div (1 + s)] - 1$ :

$$= 22.026345$$

3. Divide unamortized balance by annuity factor to get annual payment:

$$-\$5,908 \text{ million} \div 22.026345 = -\$268 \text{ million}$$

The payments in this amortization stream will increase at 3.75 percent per year. The payment at the end of the 29th year is -\$752 million. A final, partial payment will be made at the end of the 30th year and is equal to the unamortized balance, or -\$295 million.

Because experience changes normally occur every year, the only payment that would actually be made under this particular combined schedule is the -\$268 million on October 1, 2009. A new combined amortization schedule covering FY07, FY08, and the new UFL caused by experience changes in FY09 is determined as follows.

First, the combined FY07 and FY08 amortization base of -\$5,574 million is increased by one year's interest and credited with the payment of -\$268 million. The remaining unamortized balance as of October 1, 2008, is -\$5,640 million  $[-5,640 = (-5,574 \times 1.06) - (-268)]$ . This amount (-\$5,640) is then combined with an assumed FY09 experience change of +\$10,300 million, resulting in a new combined unamortized balance of \$4,660 million  $(4,660 = -5,640 + 10,300)$ . This combined amortization base of \$4,660 million is then amortized over a new combined amortization period of 29.43 years, which is equal to the weighted average of the 28.38 years remaining for the old schedule and the 30-year period for the FY09 change. The new combined amortization period is calculated as follows:

$$\frac{(5,640 \times 28.38) + (10,300 \times 30)}{5,640 + 10,300} = 29.43 \text{ years}$$

The October 1, 2010, payment to amortize the new combined base of \$4,660 million is \$224 million and is determined by means of the following procedure:

1. Bring forward unamortized balance with interest to September 30, 2010:

$$\$4,660 \text{ million} \times (1 + i) = \$4,940 \text{ million}$$

2. Calculate annuity due factor for 29.43 years at interest rate  $j = [(1 + i) \div (1 + s)] - 1$ :

$$= 22.053104$$

3. Divide unamortized balance by annuity factor to get annual payment:

$$\$4,940 \text{ million} \div 22.053104 = \$224 \text{ million}$$

This is the payment to amortize the combined experience changes for all three years.

Table N-1 shows the schedule of amortization payments for the experience changes in FY07; FY07 and FY08 combined; and FY07, FY08, and FY09 combined.

TABLE N-1

Projected Amortization Payments for Experience Changes  
(Amounts in Millions)

<u>Date</u>	<u>Payment on the FY07 Experience Change</u>	<u>Payment on the Combined FY07 and FY08 Experience Change</u>	<u>Payment on the Combined FY07, FY08 and FY09 Experience Change</u>
10/1/08	\$ -654		
10/1/09	-679	\$ -268	
10/1/10	-704	-278	\$ 224
10/1/11	-731	-289	232
10/1/12	-758	-300	241
10/1/13	-786	-311	250

### **Changes in Actuarial Assumptions**

The third type of change in the UFL is due to changes in actuarial assumptions. These assumption changes are amortized by the same method used for experience gains and losses and for benefit changes, i.e., by means of a combined schedule with initial 30-year payments that increase at the rate of the assumed basic pay scale increases.

If changes in economic assumptions include a change in either the valuation interest rate or the assumed basic pay scale increase, the amortization payments that have already been scheduled for all three categories of change in the UFL will be modified. Specifically, new series of payments will be determined to amortize the current amortization bases over their remaining periods, with payments that increase with the new basic pay scale assumption and are computed using the new valuation interest rate. The following example illustrates how this is done.

Suppose that on October 1 of a particular fiscal year, an amortization base is \$27,405 million, calculated immediately after the scheduled amortization payment is made. Say the remaining amortization period is 18 years. Also suppose that the valuation interest rate is changed to 5.75 percent and that the basic pay scale increase is changed to 3.0 percent.

The initial, revised payment, to be made on the following October 1, is determined by the following procedure:

1. Bring forward unamortized balance with interest to September 30 of next year:

$$\$27,405 \text{ million} \times (1 + \mathbf{i}) = \$28,981 \text{ million}$$

where in this case,  $\mathbf{i} = .0575$

2. Calculate annuity due factor for 18 years at interest rate  $\mathbf{j} = [(1 + \mathbf{i}) \div (1 + \mathbf{s})] - 1$ :

$$= 14.522988$$

where  $\mathbf{i} = .0575$  and  $\mathbf{s} = .03$

3. Divide unamortized balance by annuity factor to get annual payment:

$$\$28,981 \text{ million} \div 14.522988 = \$1,996 \text{ million}$$

The second and succeeding payments will increase at the rate of 3.0 percent per year, which is the new basic pay scale increase. The \$27,405 million amortization base will be credited with 5.75 percent interest. This new series of amortization payments will reduce the \$27,405 million amortization base to zero at the end of the 18th year.

## **CALCULATION OF THE OCTOBER 1, 2008, TREASURY PAYMENT**

The following pages display the calculation of the October 1, 2008, Treasury payment based on the September 30, 2007, valuation results and on amortization methods and assumptions approved by the DoD Board of Actuaries. In order to avoid a projected shortfall in the Military Retirement Fund, the Board determined that, beginning with the FY98 payment, the total amortization period of the initial unfunded liability would be decreased from 60 to 50 years. The Board again shortened the initial unfunded liability amortization period in 2007 to 42 years in order for the payments to cover interest on the unfunded liability each year.

Public Law 108-136 required the Department of Treasury to pay for the increase in the normal cost due to Concurrent Receipt. Beginning with FY2005, Treasury includes the annual normal cost payment due to Concurrent Receipt along with the unfunded liability payment in the October 1st contribution.



TABLE N-2

TOTAL TREASURY PAYMENT  
OCTOBER 1, 2008

(\$ in billions)

Amortization payment for:

1.	Initial unfunded liability	\$ 69.213
2.	Changes in benefits	\$ 7.026
3.	Gains and Losses Amortization	
	a. Changes in actuarial assumptions	\$ (5.076)
	b. Actuarial experience	\$ (20.038)
	Total amortization payment	<u>\$ 51.125</u>
	Normal cost payment	<u>\$ 3.745</u>
	Total Treasury payment	<u><u>\$ 54.870</u></u>

TABLE N-3

CALCULATION OF OCTOBER 1, 2008,  
PAYMENT ON INITIAL UNFUNDED LIABILITY (UFL)

(\$ in billions)

1.	Unamortized balance of initial UFL (10/1/06 balance $\times$ 1.06)	9/30/07	\$ 1,052.174
2.	Payment on UFL	10/1/07	\$ 66.711
3.	Unamortized balance of initial UFL (1. - 2.)	10/1/07	\$ 985.463
4.	Balance on 9/30/08 (3. $\times$ 1.06)	9/30/07	\$ 1,044.591
5.	Number of Annual Payments Remaining	9/30/08	18
6.	Value of an annuity due for remaining amortization period at interest rate equal to $(1.06 \div 1.0375) - 1$		15.092
7.	Payment on initial UFL due 10/1/08 (4. $\div$ 6.)		\$ 69.213

TABLE N-4

CALCULATION OF OCTOBER 1, 2008,  
PAYMENT ON UNFUNDED LIABILITY (UFL)  
RESULTING FROM BENEFIT CHANGES

(\$ in billions)

1. Unamortized UFL balance due to benefit changes (10/1/06 balance x 1.06)	9/30/07	\$ 132.520
2. Payment on UFL	10/1/07	\$ 6.430
3. Unamortized UFL balance after payment (1. - 2.)	10/1/07	\$ 126.090
4. Additional (new) UFL due to benefit changes	9/30/07	\$ 7.620
5. Unamortized UFL balance due to benefit changes (3. + 4.)	10/1/07	\$ 133.710
6. Balance on 9/30/08 (5. × 1.06)	9/30/08	\$ 141.733
7. Total number of years of prior amortization schedule		26.81
8. Remaining number of years of prior amortization schedule (7. - 1)		25.81
9. Total number of years of new amortization schedule (absolute values used for all numbers) [(3. × 8.) + (4. × 30)] ÷ (3. + 4.)		26.05
10. Value of an annuity due for remaining amortization period at interest rate equal to (1.06 ÷ 1.0375) - 1		20.172
11. Payment on UFL due to benefit changes (6. ÷ 10.)	10/1/08	\$ 7.026

TABLE N-5

CALCULATION OF OCTOBER 1, 2008,  
PAYMENT ON UNFUNDED LIABILITY (UFL)  
RESULTING FROM ASSUMPTION CHANGES

(\$ in billions)

1. Unamortized balance of UFL due to assumption changes (10/1/06 balance $\times$ 1.06)	9/30/07	\$ (122.113)
2. Payment on UFL	10/1/07	\$ (7.642)
3. Unamortized UFL balance after payment (1. - 2.)	10/1/07	\$ (114.471)
4. Additional (new) UFL	9/30/07	\$ 32.892
5. Unamortized UFL balance due to assumption changes (3. + 4.)	10/1/07	\$ (81.579)
6. Balance on 9/30/08 (5. $\times$ 1.06)	9/30/08	\$ (86.474)
7. Number of years in prior amortization schedule		19.31
8. Remaining number of years in prior amortization schedule (7. - 1)		18.31
9. Number of years in new amortization schedule (absolute values used for all numbers) [(3. $\times$ 8.) + (4. $\times$ 30)] $\div$ (3. + 4.)		20.92
10. Value of an annuity due for remaining amortization period at interest rate equal to $(1.06 \div 1.0375) - 1$		17.036
11. Payment on UFL due to assumption changes (6. $\div$ 10.)	10/1/08	\$ (5.076)

TABLE N-6

CALCULATION OF OCTOBER 1, 2008,  
PAYMENT ON UNFUNDED LIABILITY (UFL)  
RESULTING FROM EXPERIENCE GAINS AND LOSSES

(\$ in billions)

1. Unamortized UFL balance due to experience gains and losses (10/1/06 balance $\times$ 1.06)	9/30/07	\$ (278.988)
2. Payment on UFL	10/1/07	\$ (19.312)
3. Unamortized UFL balance after payment (1. - 2.)	10/1/07	\$ (259.676)
4. Additional (new) UFL	9/30/07	\$ 0.080
5. Unamortized UFL balance due to experience gains and losses (3. + 4.)	10/1/07	\$ (259.756)
6. Balance on 9/30/08 (5. $\times$ 1.06)	9/30/08	\$ (275.341)
7. Number of years in prior amortization schedule		17.07
8. Remaining number of years in prior amortization schedule (7. - 1)		16.07
9. Number of years in new amortization schedule (absolute values used for all numbers) [(3. $\times$ 8.) + (4. $\times$ 30)] $\div$ (3. + 4.)		16.07
10. Value of an annuity due for remaining amortization period at interest rate equal to $(1.06 \div 1.0375) - 1$		13.741
11. Payment on UFL due to experience gains and losses (6. $\div$ 10.)	10/1/08	\$ (20.038)

